DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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FEBRUARY—FIRESIDE PLEASURES.

"Season of social mirth! of fireside joys?
I love thy shortened day, when at its close,
The blazing tapers, on the jovial board,
Dispense o'er every care-forgetting face
Their cheering light, and gladdening influence."
Grahame.

FIRESIDE amusements are the peculiar blessing of Providence, to compensate us for the deprivations of winter; and there is probably more poetry, as well as more good practical philosophy, engendered in the family circle, around the winter evening fire, than in the field, or in the closet. Here every topic is discussed that is interesting to civilized man, and old and young, ignorant and learned, all take their part in the conversation, and contribute their mite to the great fund of human knowledge.

Did the reader never consider that the pleasures of the evening fireside can be experienced only by the inhabitants of cold climates? In southern countries, the people sometimes build a fire for comfort in rainy seasons, and huddle round it for an hour or two; but such occasions are always a breaking up of their usual habits. No enduring necessity for evening fires gives origin to a regular assembling of a family circle around the hearth, nor to the infinite variety of pleasing tastes and amusements which are thus participated.

The poet of a northern clime alone could have written thus feelingly of the pleasures of an evening assembly of the family group, as in the following lines by Cowper:—

"Now stir the fire, and close the shutters fast,
Let fall the curtains, wheel the sofa round;
And while the bubbling and loud hissing urn
Throws up a steamy column, and the cups
Which cheer but not inebriate, wait on each,
So let us welcome peaceful evening in."

Not only does the fireside give origin to a multitude of interesting amusements, and a fund of rational conversation, but it leads us to reflect with peculiar sensibility upon the sufferings of those whose poverty deprives them of these enjoyments. It is in these little assemblies therefore, that many of those schemes of benevolence originate, for which the people of northern countries have always been distinguished. As there is a greater variety of pleasures, so there is a greater liability to suffering, in a cold country; and hence there is a constant appeal to our sympathies from sufferers in our neighborhood, especially on winter evening's when their necessities become the subjects of discourse, and when the cold and the tempest without, place their sufferings vividly before the imagination. If it be our duty to thank God for the gifts which contribute to promote our physical well-being,—we have no less reason for gratitude on account of the influences that serve to cherish in our hearts those amiable and benevolent virtues, from the exercise of which the greater part of our moral happiness is derived.

William Howitt draws a beautiful picture of the cheerful emotions which are awakened by the scenes of a British fireside. "How delightful," he exclaims, "while sitting in the midst of our family, or friendly group, not only to contemplate our own happiness, but to send our thoughts abroad over the whole land! To think what thousands of families in this noble country, are at the same moment, thus blessedly collected around the social flame! What hearths are lit up with all the charms of kindred affection, of mature wisdom and parental pride;

of youthful gladness, gaiety and beauty! How many rural halls and city homes are shining, like stars in their own places, in unabated warmth and splendor, though hid beneath the broad veil of wintry darkness;—the lover's evening visit,—the song, the wild tale told to the listening circle, or the unfolded stores of polite literature, making each a little paradise."

Man owes his intelligence, say some philosophers, to *his hands*. Admitting that there is some truth in this remark, there would be more truth in saying that man owes his intelligence to conversation.

Fireside meetings are, therefore, the nurseries of intelligence; for as sure as there is an intelligent member of the family circle, he will communicate his ideas and the habits of his mind in a degree, to the other members. The fireside is, therefore, the school of intelligence as well as virtue.

"There every plant of useful knowledge grows;
There science sprang, and thence instruction flows;
There true philosophy erects her school,
There plans her problem, and there forms her rule;
There every seed of every art began,
And all that comforts life, and brightens man."

Melmoth.

It is in the family circle and around the social hearth, that the influence of woman is most likely to be predominant; and it is perhaps to this cause that we may attribute the greater respect for the female sex, that is manifest among northern nations, compared with the inhabitants of the South. In Germany, that chivalrous regard for the fair sex originated, to which more than to any other cause, except Christianity, woman owes her emancipation from the slavish bondage, to which she has in all ages been subjected. Around the social hearth, woman is the queen and leader of conversation; and if she happens to be possessed of superior intelligence, her influence in this circle is sure to be felt. A Provincial Academy in France, some years ago, proposed the following question as the subject for a prize essay:—"In what manner might female education be made subservient in rendering men better subjects of society?"

Were we to attempt to answer this question, we should say that it could be done in the most effectual manner, only by fostering in the female mind an ambition to be influential in the family circle, and by teaching every young girl to consider her own home as the theatre for the display of her talents and the exercise of her virtues. How many young women, by such an education might be saved from those disappointments arising from wounded vanity, which are sure to fall to the lot of the votaries of fashion! And how many young men might be saved from the corrupting influence of vicious company abroad, by the captivating conversation of intelligent women in the family circle! It is from the want of this benign influence, that so large a portion of our young men seek for amusement in public places where fashion and vice have all the sway, because our women have been educated to think more of shining in silks and jewels abroad, than of exercising a charming sovereignty around the parlor fireside.

Wherever a woman of talent centres her ambition, there will she shine, unless she centres it in the world of fashion. There, talents and virtue avail but little, because riches only can furnish the materials that are agreeable to fashion, which appreciates only what can be purchased with gold. But home is a place where the virtues are sure to be rewarded, and where superior talents and education are sure to obtain superior sway.

The purport of these remarks is not to repress the zeal of a rational ambition, but to direct and guide it into a wholesome and virtuous channel. Let the fireside be made the constant theatre of rational amusements and entertaining conversation, and home then will become what it ought to be, the predominating influence in the education of the young.

"Few can on Grandeur's stage appear,
Each lofty part with true applause sustain;
No common virtue safe can steer,
Where rocks unnumbered lurk beneath the main.

"Then happiest he whose timely hand
To cool discretion has the helm assigned,
Enjoys the calm in sight of land,
From changing tides secure, and trustless wind."

Above all would we recommend to our rural population, who constitute the majority of our readers, to make their home a pleasant scene of social intercourse. There is no family so humble, that books, and useful and entertaining journals may not enter it, and diffuse among its members that knowledge which has been gathered from all nations. There is none so isolated that its evening fire may not be the centre of a rational party of friends, and the nursery of intellect and virtue. There, during our long winter evenings, may the experience of the past year be discussed and brought home to the mind, new information acquired, and new rules learned for abridging labor and rendering it more productive. The farmer's time for study is mainly the winter season; this is the seed time of his mind; and to him the winter evening may be made especially profitable for the storing of his mind with useful knowledge, by reading, study and conversation.

No man who has not begun to lose the use of his faculties is too old to acquire useful information, or to gain new skill in the use of the knowledge he already possesses. Many an intelligent man of toil may thus preserve his mind from that premature decline, which is apt to be the fate of those who labor with their hands, and neglect the exercise of their mental faculties.

For the New England Farmer.

CULTURE OF FOREST TREES.

Mr. Editor:—I was glad to see the remarks of M. on tree culture, and also to find that the waters of Essex are in motion on the subject, for there is certainly no department of rural economy so much neglected as the culture and growth of forest trees, and none more important to the best interests of the Commonwealth. So, then, we say the Essex County Agricultural Society was doing good service to the State by agitating the subject, for good will come of it sometime and in some places. But, had that association adopted a plan of proceeding in the case, and offered not only its influence in the cause, but a bounty to those who did the most, it would have given an impulse and set an example for other similar societies which they would not have failed to follow.

But few of the hundreds of miles of highways in this Commonwealth are yet occupied by trees whose growth would be a rich percentage on the labor bestowed, and whose shade would yield a rich harvest of comfort to the traveller. If these highways were all converted into extended avenues, it would amount to many acres of valuable woodlands, all growing on lands which now yield no pecuniary benefit.

Then look at our old, exhausted lands, our fields too rocky to admit of cultivation, and our side hill pastures, where the rains are too apt to remove the soil after the plow has loosened it. How much more valuable these would be if the forest was waving its foliage over them? And how easily they might be brought into the forest state? One light plowing, and the seeds of the maple, the birch, the ash or the elm sown over them; a few locusts set here and there to throw up their prolific suckers, and exclude cattle and sheep, and in a short time a thick and luxuriant growth of young trees would cover these deformities, that man in his greediness of gain, rather than by successful enterprise, has created.

It is the work of the landholder, we admit, to carry out these improvements. Many of these will raise the objection that they don't know how to give up the use of the field and incur the expense of fencing it to secure the object. There certainly would be a slight sacrifice of lands that produce but little now, to obtain a more abundant harvest ere long. The expense of excluding cattle would in most portions of the State be great; varying with the price of labor and cost of fencing material.

So, then, the farmer who engages in this matter of public as well as private enterprise should be a subject of public bounty. At least our Agricultural societies should offer a bounty to those who plant trees by the way-side, or cover lands otherwise nearly worthless with forest growth.

If the State lent its more direct aid and released all lands successfully sown or planted to forest trees, from taxation for a series of years, it would remove one obstacle, though it may seem a slight one, and at the same time do herself a service that future generations would not fail to appreciate. This encouragement would wrong no one, and would probably result in effect quite as beneficial to the public at large as any act of beneficence they are in the habit of bestowing. Yours truly, W. B.

Dec., 1856.

CHINESE SUGAR CANE.

It affords us pleasure to find so early, a manual upon the history, cultivation and manufacture of sugar from the plant recently introduced among us as the *Chinese sugar cane.* We have already spoken of its culture and growth, and of the syrup obtained from it, and have ventured the opinion that, eventually, it is to become a plant of prime importance in our commercial as well as domestic interests. This manual confirms those opinions. The work has been prepared by James F. C. Hyde, Esq., a well known writer in our columns. Mr. Hyde is a nurseryman, at Walnut Grove, Newton Centre, Mass., and a gentleman deeply interested in whatever relates to the interest of the farmer. He has brought together a mass of information which will unble the cultivator of the cane to go on unnerstandingly in the work.

The book is printed in Jewett & Co.'s neat and attractive style, in large type and on good paper Price only 25 cents.

North-Western America.—Attention has been recently called by various parties to the tracts of land in the North-Western portions of this country. It seems that there are lying about the sources of the Missouri river, and extending northeast of the Rocky Mountains, to the sources of the Athabasca river, (54 deg. north latitude,) extensive and valuable tracts of land susceptible of a high state of cultivation, and with a climate mild and salubrious. The climate is stated to be singularly mild, according to the estimate we generally make as to what is due such latitudes, from experience in the Eastern States and Canada. Something may be judged of the difference in climate and cultivable capacity between that belt and the Hudson's Bay region, from the fact that wheat may be grown on Mackenzie's River nearly to the 65th parallel. The mean winter temperature at Fort Benton on the Missouri, in longitude 110½ deg. west. and latitude 47½ deg. north, is 25 degrees, being warmer than that of Minnesota, and the same as that of Chicago, Toronto, Albany, and Portland, Me.

The business capacities of these regions are immense, and it is only necessary for a few vigorous colonists from Canada or New York to make an excursion into them, and to develop their natural resources, to render that country one of the most desirable localities to be found in the far west. Situated in the vicinity of the Oregon and Missouri rivers, and the chain of the Great Lakes which constitute the central line of the habitable continent, proper activity and enterprise could not fail to open extensive tracts to occupation and commerce in that quarter.—*Traveller.*

☞ The Salem *Observer* says that Mr. Peabody has, within a few days, made another munificent donation for the benefit of his former fellow-citizens in Danvers, namely:—For the maintenance of the Library of the Institute, $1200 a year during the remainder of his life. For the establishment of a Branch Library in Danvers, (formerly North Danvers,) the sum of $10,000.

For the New England Farmer.

GOULD'S MURIATE OF LIME.

MR. EDITOR:—With the exception of a few general and important facts, the science of agriculture—even at the present day—seems to be as dark and abstruse a subject as theology. Agricultural chemists differ as much about the proper elements of soil to grow good crops, as theologians do about God's will to man, and man's duty to God. "Put not your trust in special manures," should become a proverb. The multifarious dry compound, scraped together by chemists or "enterprising men," commonly denominated "Fertilizers," are more frequently than otherwise apocryphal and treacherous. Coming from the heads and hands of men who have little or no practical experience in their use, they are quite likely to bring disappointment to the real cultivator. I have no wish, however, to enlist against "Book Farming;" for book farming, as a general rule, is but a transcript or record of actual farming—successful or otherwise—and is worth precisely as much as if the facts were communicated orally from neighbor to neighbor. A patent fertilizer does not lose its virtues, if any it possess, by being extolled in a newspaper or magazine; and the farmer loses nothing if he finds it condemned, through the same channel, by the practical experimentor. But I forbear digression.

At the present sitting I propose to allude to Gould's Muriate of Lime. "The high price of the special manures, guano, &c.," says the proprietor, "first led to the composition of a fertilizer which should combine all their good qualities, but whose price should place it within the reach of the poorest of the cultivators of the soil." And Mr. Gould claims that he has accomplished his aim. The article certainly is cheap in bulk, compared with other fertilizers, and that it is good for the purpose intended we have the commendations of two able chemists, Dr. Hayes and Dr. Jackson. These gentlemen, it is supposed, so well understand their business, that any gross omission or imperfection in its composition by its manufacturer, would by them be readily pointed out. The *N. E. Farmer* has published their opinions, which all may read.

Mr. Gould has not only been fortunate in winning the scientific judgment of these eminent chemists, but practical farmers have come in with their "confirmation strong as holy writ," and sustained the inventor and analyzers—than which nothing could be more gratifying.

Mr. Larkin P. Page, of Bedford, Ms., writes in the monthly *N. E. Farmer* (Vol. VII., page 245,) that he tried it as a top dressing at the first hoeing of six rows of corn, into the hills of which no manure had been placed, and it resulted in a crop about "one-third heavier than that in which compost or guano was used." A few potatoes which received the same treatment, were nearly twice as large as those raised in ordinary manure.

In the same volume, (page 400,) a writer in Charlestown speaks very highly of the muriate as a destroyer of the canker worm; as a corrective of the sourness of meadow lands; and as probably the best manure for grass. But he gives no facts, and I suspect he is not a cultivator.

Also on page 512, John W. Brooks, of Somerville, being unable to raise good crops from land which appeared to be rich, observes:—"This season I was requested by a friend to try Gould's muriate of lime. I did so, but with little faith in its success. You may imagine my surprise, when I came to dig my potatoes, to find, not a miserable crop, like that of previous years, but one of as fine potatoes as I have ever seen, and just *four* times the quantity. The difference in the yield of my corn and squash vines was in about the same proportion."

Looking at these articles last spring, induced me to try this fertilizer in my garden. I procured but a bag, yet enough to test it, without incurring much expense. My soil is elevated, with a western aspect; is of a moderately rich, friable loam, and has yielded a great many stone. I planted about 50 hills of potatoes, with a good handful of this fertilizer alone in the hill; also a row of peas; of snap or string beans; and about 30 hills of sweet corn, in all of which the muriate was mixed in the earth before planting, except an additional top-dressing on the corn, which seemed to call for assistance.

Mr. Gould, in his advertisement, gave cultivators to understand that his muriate, among other garden vegetables, was excellent for "peas, beans, and all pod-bearing plants." Of course I had a right to expect that the marrowfats would at least keep up their reputation; but they never got more than a foot high, or furnished more than two or three peas to the pod! Coal ashes or brick dust could not have done worse. The beans also, were exceedingly feeble. The potatoes raised in pure muriate were a failure, yielding not more than half of those planted in good compost. The corn did not start well, (for some special reasons, I suppose,) and did not furnish a respectable ear. In fact, on none of the vegetables where tried could I perceive the least good effect, whether mixed with the manure or not.

Dr. Jackson states that the muriate is "a valuable manure, admirably adapted to silicious soils," and that "twenty per cent. of this compound is soluble in water." Dr. Hayes observes that it is "adapted at once to enter into vegetable organism, as a constituent of their substance," and that the animal matter "is easily decomposed after the fertilizer has been wet." The past season has been unusually rainy—a condition favorable for the development of all the virtues of organic manures—yet why no better results?

About midsummer a neighbor of mine, while in my garden, exclaimed—as I told him I had been trying the muriate of lime—"O, you'll find it good for nothing. I tried a dozen barrels last season without any good effects." Two other of my neighbors purchased several bags last spring, and have both been equally disappointed with myself.

Now I do not say that this so-called fertilizer is worthless on all plants, or on all soils; but it is evident, that if it possess stimulating powers, *they do not so readily act as to grow garden vegetables.* Sown on grass land in the autumn, it may be beneficial; and it may assist the decomposition of organic manures, and act an important part in bringing into a productive state peat, and all new soils abounding in vegetable matter. But it must take time. Yet for these purposes is it any better than quick lime, or the semi-hydrate of lime? And as to using lime on a heap of manure rich in ammonia, Morton condemns it, as it sets the nitrogen free, "which is the very treasure of the dung heap."

How a special manure, abounding so much in inorganic matter as the muriate of lime, should be recommended alone for garden vegetables in gen-

eral—which require warm fertilizers of easy assimilation—is not a little remarkable. Neither of the chemists alluded to above, recommend it for such purposes, though we might imply it from Dr. Hayes, who speaks of "animal matters, being derived mostly from fish remains." Yet Dr. Jackson says the organic matter is only 4.59 per cent., which, I should think, does not indicate that the article could furnish ready pabulum for vegetables. Plants generally require but very little lime, and this is usually returned to the soil in the ordinary manures. It is only when this element has been carried off by frequent croppings of plants having a large proportion of lime, that it is necessary to supply it artificially.—Lime, in the economy of vegetation, seems to be merely an assistant fertilizer, and therefore not to be confided in alone. Speaking of quick and mild lime, Prof. Johnston observed: "They act by supplying the lime which all plants require as a part of their food—by combining with acids in the soil, so as to remove the sourness of the land, and by converting the vegetable matter into the food of plants."

Since writing the above, I have seen a circular of Mr. Gould's, issued since September, 1856, in which he announces his reception of a medal and diploma from the Massachusetts Charitable Mechanic Association, for his fertilizer. I certainly hope it will have all the success it deserves; but it would be well to inquire whether these practical chemists, who made the award, are *practical* cultivators to any extent, and have tested it on the soil. This circular enters into an elaborate eulogy on lime, and endeavors to show the importance of this article in the soil; all of which, perhaps, few would deny. But this is extolling *lime*, not "Gould's muriate of lime." Hence the believing cultivator would probably purchase quick lime from the nearest source, and get an article better for some purposes, equally good for all, and much cheaper than the muriate. And in regard to cheapness, permit me to observe, that a neighbor of mine, who has been disappointed in the use of the muriate the past season, and whose trade makes him familiar with lime, says, that two of Gould's barrels of muriate can be made from one of quick lime, owing to its expansion from slacking. If, then, simple lime is the important thing for land, few would think of purchasing Gould's preparation at a double price. It is thought also that the manufacturer of this compound purchases the poorest of lime—say at about 62 cts. per barrel—and to this adds ground oyster shells, something cheaper still.

Mr. Gould claims that this article will prevent the potato rot, and that this valuable vegetable has deteriorated from a want of lime. Here is a chance for debate; but I will simply state that one of my neighbor's Chenango potatoes rotted badly, on which he had used the muriate. The Long Reds of my garden, on which I used this fertilizer, rotted but a little, yet more than the year previous, and many of them were rough from caustic action. (This variety I think is exempt, from its late growing.) But if the muriate is really what the manufacturer claims in this respect, is not partially slacked lime equally as good? And in regard to its destroying insects, what is it which they dread in the muriate more than in pure lime?

I much regret, in conclusion, that this new article has left me without faith in its efficacy as a ready stimulant, or reliable garden fertilizer; for it is cheap, compared with other fancy manures—all of which amateur horticulturists like to test. But whether it would pay to put ten or fifteen barrels to an acre of grass land, agriculturists must decide for themselves. D. W. Lothrop.

West Medford, Nov. 25, 1856.

Remarks.—The above seems to be a fair expression of the writer's own experience as well as opinions formed from the practices and statements of others. If the muriate is a good article, it will bide the shock of this and all other criticisms. It is clearly our duty, when invited, to present the candid views of our intelligent correspondents.

CALIFORNIA FARMING.

"All is not gold that glitters;" nor, thank fortune, is all worthless that does not glitter. The mineral wealth of California which flashed so suddenly upon the vision of a money-dreaming world, is pale and dull in contrast with her vegetable productions. What are a few particles of gold mingled with the sand and mud of the earth's surface, or seamed into rocks, when compared with trees whose trunks spring from the soil to an elevation exceeding twice the height of Bunker Hill monument? Such monstrous trees, however, are but specimens of the wonderful fertility which the soil of California delights to manifest.

> "Whatever fruits in different climes are found;
> That proudly rise or humbly court the ground—
> These here disporting own the kindred soil,
> Nor ask luxuriance from the planter's toil."

The Fair of the State Agricultural Society held last fall at San Jose, must have afforded a grand spectacle to those who are more interested in the productions of her farms, than in those of her mines. Although we have not seen a full description of the exhibition, we have seen enough to excite our wonder and admiration. Samples were presented of oats from a yield of one hundred and thirty-four bushels to the acre; beets weighing one hundred and three pounds, and of those that measured three feet and four inches in length, two feet and two inches in circumference, at the top, and twenty inches in circumference two feet and a half from the top; of cabbages, measuring four feet and eight inches in circumference, weighing fifty pounds; of pumpkins as large round as an ox, measuring seven feet eight inches in circumference, and weighing two hundred and fifty-six pounds and of many other mammoth vegetables.

The early maturity of fruit trees in California is perhaps even more wonderful than the great size which vegetation attains there. In Col. Wilder's address before the American Pomological Society, at Rochester, it is stated that one of his neighbors, who went to California in 1854, and now resides in Napa city, writes:—"Such is the rapid growth of vegetation in this district, that apple trees from seed planted in the spring of 1853, and budded the

same year, yielded fruit in the autumn of 1855." He says, in the same letter to Col. Wilder, "I wish you could take a look at our peach orchard, loaded with fruit. You could hardly believe that the trees had made all their growth, and were most of them raised from seed since I came to California, (Feb. 8, 1854.) The crop from this orchard is now (July 18, 1856,) going to market, and we expect it will amount to between ten and twenty thousand dollars."

But intelligent farmers in California do not suppose that the fertility of the soil is inexhaustible. We find in a late number of the *California Farmer* timely cautions against the "skinning" process that has so greatly impoverished the soil in other sections of our country. The writer argues that, in consequence of the peculiarities of the climate on the Pacific coast, a somewhat different course must be adopted to preserve the fertility of the land from that pursued in other agricultural sections. He says:—

"In other States and countries, where agriculture has been studied and practised, both as a Science and an Art, rain falls at short intervals during the warmest summers, and in consequence, as a general rule, the warmer the weather the greater the luxuriance of vegetation. There the grass is ever green, and a regular rotation of crops, admitting of an agreeable change, such as Nature delights in, from one species to another, may be adopted with ease, and the profits of such a sensible rule calculated on with certainty. Here the long-continued drought of summer, in most cases, entirely precludes the possibility of having clover and the usual grasses, so essentially beneficial in other States, admitted into any course of crops which may be adopted.

"Turnips, also, form a crop which in many countries have conferred upon northern latitudes the advantages in some respects of the tropical, by affording to the farmer, at seasons when 'the hills are covered with snow,' the luxury of green and juicy food for his stock. But turnips could not be raised in this State, to be of any benefit when we are most in want of them, namely, when the old grass has been eaten cleanly off, and the earlier rains of winter have not had time to restore even a scanty vegetation in the pithless leaves of the new."

The writer of the article from which the foregoing is extracted, does not express any opinion as to the course that should be pursued by the farmers of California; he merely calls attention to the importance of "making some compromise with nature," by which the present fertility of the soil may be preserved. We regret that he does not suggest some definite plan; because, without grass and clover, whose multitudinous fibres fill the soil with a mass of vegetable matter that has been estimated to amount in some cases to forty tons per acre, and whose tap-roots are thought to be a tolerable substitute for the sub-soil plow, we should hardly know where to begin or end a system of rotation. Nor should we be willing, we think, to exchange the green carpet which covers our hills and dales, and which the eye never tires in gazing upon, even for the bright flowers and mammoth vegetables which manifest the wonderful fertility of the soil of this land of gold.

Wonderful in gold, wonderful in fruits and vegetables, California is still more wonderful in itself. To her how strictly applicable are the exclamations of the poet-prophet,—

"Who hath heard such a thing? who hath seen such things?
Shall the earth be made to bring forth in one day?
Or shall a nation be born at once?"

But to us, as an Editor, the *California Farmer* is the most wonderful of all. As large as our own weekly sheet, this paper has already advanced far into the sixth year of a vigorous existence. It is well edited, has able correspondents, is one of the most spirited of our agricultural exchanges, and appears to be well supported. And all this, on a portion of the earth's surface, of which a dozen years ago the civilized world knew little more than they did of the territories of the moon,—a portion, too, that has been settled by people who went there,—as Cortez scornfully told Montezuma he and his followers came to Mexico,—not to till the soil like peasants, but to gather gold.

For the New England Farmer.

THE YOUNG MORRILL HORSE.

MR. EDITOR:—Some weeks since I spoke of the Morrill Horse, raised by "French Morrill," of Danville, Vt., and kept in that town till last September. I wish now to say something of the Young Morrill Horse; one of his colts. There are several by that name, which by the way is in bad taste. One may well be so named; every other should be called something else, so that no one shall be deceived.

The horse of which I wish to speak was the first colt named Young Morrill, and I think him fairly entitled to that name. But that I may not be misunderstood, I will say that the Young Morrill Horse is owned by Messrs. Town & Trow, of Barre, Vt. He is eight years old last spring, of a dark bay or brown color, about 16 hands high, and weighs 1165 pounds. His style is excellent, countenance very fine, and intelligent, and in every respect he is a perfect model of strength. He is mild and comfortable, yet seems to be full of all that life and energy which go to make up a desirable horse. If he was a gelding I would select him for business or family use, before any other one I ever saw.

In regard to speed, he is in the first class of stallions, and were he filled and trained like Ethan Allen or Hiram Drew, I think he might easily go to the head. His best time that I know of is ¼ mile in 1.17. He makes his mile in 2.40 with perfect ease, and frequently in 2.38 and 2.37. All the training he has had, has been caught at the fairs where he has been entered for premiums. He received the first premium of $60 at the "New England Fair," at Brattleboro', Vt., in 1854, also the first at "Vermont State Fair," in 1855; and at Boston, at the "National Fair," in 1855, he received

the first premium of $200, as a stock horse for general use. He is acknowledged to be the most powerful horse in New England, I believe.

There are fast, fancy, family, draught and military horses, but one that combines all these qualities is a very scarce, though very desirable animal. Young Morrill comes up well nigh to the standard of perfection. His sire was "Old Morrill," his dam "Sherman Morgan." The colts from him are very promising. His owners, so far, I think, have managed him wisely; preferring to keep him for stock, rather than put him on the race-course. In justice to his owners, I would say, that they are very careful men, and safe hands in which to trust valuable breeding mares. The horse is a valuable one, making a fine income annually, but his stock belongs to the public. May they appreciate it. How long will our farmers cling to *runtlings* to improve a race, and continue to feed and rear from the fourth down to the sixteenth rate horses which are miserable to look upon, and to ride after are truly painful? LEONARD T. TUCKER.

Meredith Bridge, N. H., Nov. 29, 1856.

For the New England Farmer.

CONDITION OF THINGS IN IOWA.

Winter has set in, New England fashion, in Iowa. Seldom do you have a more decisive *north-easter* than we are having to-day. Early in November, we began to have manifest tokens of approaching winter, in the form of sleet, and snow, and bitter frost. This was succeeded by heavy rains, and *horrible mud*, so that we have had but little pleasant weather and good travelling since October. When we are to have any more, time will show. Surely, the seasons are very variable in the West; for we have "heard tell" of mild and beautiful weather, even till the very last of December. However, we have no complaint to make about the weather.—Whoever, or whatever else may be wrong, *the weather* is always *right*. We may not always be *prepared* for its developments, but that is not the fault of the weather, nor of its Author. Therefore, we say concerning it, "Let be the things that are to be."

The weather is not the only variable thing at the West. The price of *wheat* is nearly as much so—often to the great disappointment of those who raise it, and depend upon it to pay their store bills, and meet their other obligations. Early in the season, it was one dollar a bushel, delivered at the railroad, or the river; now, it is only seventy cents at the same places. So much for being behindhand. Potatoes, on the other hand, are higher now than they were two months ago. As to chickens, you can buy as nice and as fat ones as ever grew, for fifteen cents apiece, all dressed, ready for the cook. Undressed, they are *a bit* apiece; or, as you would say, *a ninepence*. Molasses, again, the cheapest kind, seventy-five cents a gallon; brown sugar, the cheapest, eight lbs. for a dollar; and common crushed sugar, six lbs. for a dollar. Dried apples—we have no others—twelve and a half to fifteen cents a lb. So, while we get our flour, and meal, and pork, cheaper than you, we pay much more for almost all imported articles, dry goods, hard ware, furniture, rent, interest-money, etc. I name *interest*, because many more are paying than receiving interest. The rise of property in many, perhaps most cases, balances the high rate of interest. I am paying ten per cent. on some land, bought six months ago, that would not bring any more to-day than I paid for it. In other instances, the value has been doubled, in the same time.

It is astonishing with what avidity the people go in for railroads. Several years ago, one was *almost* built through Cedar county. Thousands of dollars were spent in grading, and thousands of dollars thereby added, as many affirm, to the value of property in the county, although the road was never completed, and never will be. Just now, there are no less than three or four others in contemplation, through the same county; two of them starting from nearly the same point, and running within a few miles of each other, for a considerable distance. They are all *sure to go*, their advocates affirm; and the grading of one of them, (from Camanche on the river, to Iowa city,) is actually contracted for, I am informed, though no survey has, as yet, been made! And the market value of land, and other property, along the route, and in the villages, will rise from twenty-five to fifty per cent., if the road is constructed; and simply remain stationary for a time, if the project fails.—A very intelligent gentleman in this town told me that he would give one thousand dollars to the road, if it should come. He did not think the stock would be worth a cent; but it would raise the value of his property to that amount.

One of our chief wants, in this part of the State, is good fuel. We are *beginning* to use coal; but have not yet got our *fixings* nor our *coal* on hand, (waiting for a railroad to bring it,) and so we are obliged to pay four or five dollars a cord for the meanest wind-fall trash that was ever burned. I have never seen a *respectable* load of wood, such as I used to see in Massachusetts, in this goodly county seat of Cedar county. Not because there is not good wood enough in the county; but because there is so great a demand for building and fencing purposes; and because those who own it, in large quantities, are keeping it for higher prices. For the sake of *the poor*, we humbly hope, and fully believe, that it will turn out to them as in the proverb: "There is a sore evil which I have seen under the sun; namely, riches kept for the owners thereof, to their hurt." M. K. C.

Tipton, Iowa, Dec. 2, 1856.

ACTIVITY OF BIRDS.—The activity of birds when they have young is most surprising. Dr. Macgillivray records the observations made by a friend on a pair of blue tit-mice when rearing their young. The parent birds began their labor of love at half-past three o'clock in the morning, and did not leave off till after eight o'clock in the evening, after being almost incessantly engaged 17 hours.—Mr. Weir counted their various returns to the nest, and found them to be 475. Up to four o'clock, as a breakfast, they were fed 12 times; between five and six, 40 times, flying to and from a plantation more than 150 yards from their nest; between nine and ten o'clock they fed them 46 times, and they continued at their work till the time specified, sometimes bringing in a single large caterpillar, at other times two or three small ones. The number of destructive insects removed by birds when feeding their young must be astonishing, if they were

in any degree as active as the two blue tit-mice so patiently observed by Mr. Weir on the 4th of July, 1837. Great as the number of returns to the nest seems to be, it certainly does not exceed that of the common window swallow.—*White's Popular History of Birds.*

NEW PUBLICATIONS.

REGISTER OF RURAL AFFAIRS.

This is an *Illustrated Annual*, edited by J. J. THOMAS, Esq., one of the Editors of the *Country Gentleman*, Albany, and published at Albany, by LUTHER TUCKER & Son, and for sale by A. Williams & Co., Boston. It contains an almanac, suggestions for laying out and dividing farms, the art of planning farm-houses, with models, the management and capital of the farm, farm implements, fruit culture, laying out orchards, culture of small fruits and climbing annuals, lawns, rock work, weights and measures, contents of cisterns, preparing soil for gardens, comparative amount of food consumed by different animals, doctoring sick animals, how to propagate plants by cuttings and prevent wheat from sprouting, save mice-gnawed trees, together with many valuable facts and suggestions which we have not enumerated. It is a valuable hand-book for the farmer or gardener. Price 25 cents.

THE OLD FARMER'S ALMANAC. By ROBERT B. THOMAS. (Or his Good Genius!) Published by Hickling, Swan & Brown, Boston.

We should like to see the person who pretends to know when it is to rain or shine, blow or freeze, without the aid of the Old Farmer's Almanac, by Robert B. Thomas. Why, the very pork in the pot wouldn't boil in some houses unless the Farmer's Almanac were there! It tells you almost everything; it has interest tables, and post office regulations, and railroad matters, and anecdotes, &c. And then there is the poetry over the calendar pages, and the pictures, the goats, crabs, centaurs and balances, with such a quantity of agricultural lore, and all for 6 cents! The family without the Farmer's Almanac must certainly be behind the times.

MORGAN HORSES.

This is a premium essay on the origin, history and characteristics of this remarkable American breed of horses; with numerous portraits. Also, hints for breeding, breaking, and the general use and management of horses. By D. C. LINSLEY, Middlebury, Vt. C. M. Saxton & Co., N. Y.

The work is issued in the neat and attractive style of the popular publishing house whose imprint it bears; the paper and binding are good, and the type is large and clear. We have looked over its pages with considerable interest, and particularly so with regard to the chapters on "*breaking and driving*," and "*feeding and driving*." These are excellent, and ought to be in the hands of every person owning a horse. What with brutal blows, short, or untimely feeding, exposure when heated, and that miserable taste which tortures horses with martingales, check-reins, and other trappings, they are truly a persecuted and suffering race.

The chapter on "*hints to purchasers*" may save that class many a hard nip if they study it carefully. It contains facts which, if they were to be gained by *experience*, might be very dearly purchased. The horse trade has its glitter and varnish, as well as any other, and the "Moses" so graphically described in the Vicar of Wakefield, is not the last of that class to be "taken in." It has a good Index. Any one that can afford to keep a horse, can afford to purchase this book.

VOICES OF THE HEART.

A little volume of 120 pages. By FANNY FALES; published in 1853, by B. B. Mussey & Co., Boston. Sometime since we found a beautiful waif in one of our exchanges, entitled, "A Dying Wife to her Husband," and published it in the November number of the *Farmer*. Soon after we received from the author the volume of poems from which it was extracted, and find that the gem received some damage in the transfer. But it was not our fault—we gave it as we found it. The volume before us contains many poems of merit. While their sentiment is correct, they have natural poetic language, an easy versification, and evince great tenderness of feeling.

INFLUENCE OF A NEWSPAPER.

A school teacher, who has been engaged a long time in his profession, and witnessed the influence of a newspaper on the minds of a family of children, writes to the Ogdensburg *Sentinel* as follows:

"I have found it to be the universal fact, without exception, that those scholars of both sexes and of all ages who have had access to newspapers at home, when compared with those who have not, are

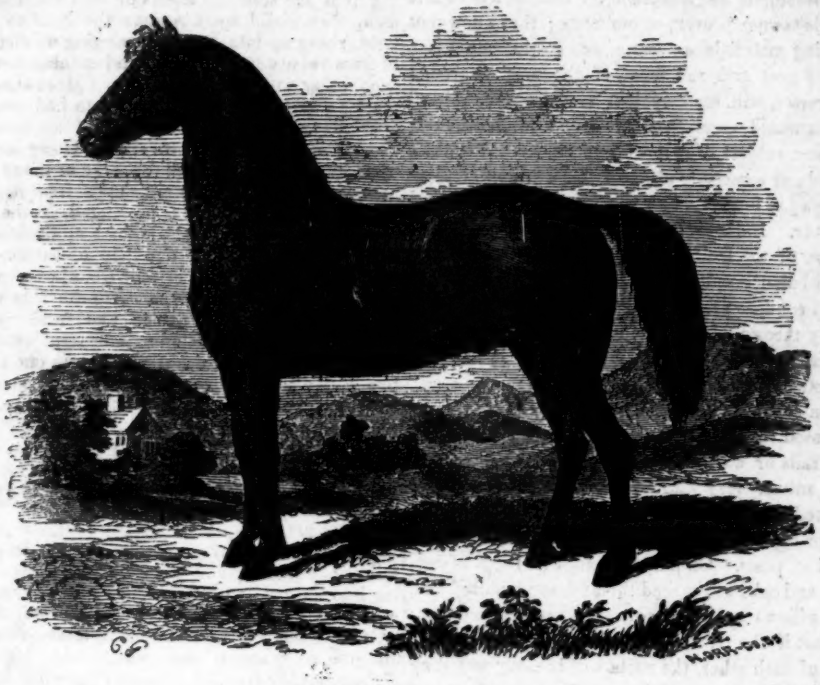
1. Better readers, excelling in pronunciation, and consequently read more understandingly.

2. They are better spellers, and define words with ease and accuracy.

3. They obtain a practical knowledge of geography in almost half the time it requires others, as the newspaper has made them familiar with the location of the most important places, nations, their governments and doings, on the globe.

4. They are better grammarians, for, having become so familiar with every variety in the newspaper, from the commonplace advertisement to the finished and classical oration of the statesman, they more readily comprehend the meaning of the text, and consequently analyze its construction with accuracy.

☞ When Aristotle was asked what were the advantages of learning, he replied, "It is an ornament to a man in prosperity, and a refuge to him in adversity." How true, but how little known to the uneducated.



THE JUSTIN MORGAN HORSE.

We copy the following account from Linsley's History of Morgan Horses.

The different accounts that have been circulated in regard to the origin of the Morgan breed of horses, agree that they are descended from a horse called the Justin Morgan, who derived his name from Mr. Justin Morgan, of Randolph, Vt., once his owner. As to the origin of the Justin Morgan, however, they differ widely.

The fact that little or no interest was felt in the subject until after the death of Mr. Morgan, and indeed, until after the death of his horse, will account for this diversity.

Almost half a century passed away before any serious effort was made to determine the origin of an animal, whose value was daily more and more appreciated. After the death of Mr. Morgan, the horse passed through several hands, and was kept at different places, and when at length serious inquiry was awakened on the subject, it was found that Mr. Morgan had left no written pedigree of his horse, and different reports of what he said in relation to it got into circulation.

It is now probable that the blood of the Justin Morgan can never be exactly and absolutely ascertained. We think, however, it may be considered certain that this unrivalled animal was produced by a cross of the Arabian or thorough-bred with the common stock, but the proportion of each cannot now be determined.

Their height is from fourteen to fifteen hands; color, bay; make, round and heavy, with lean heads, broad and deep chests, the fore-limbs set far apart, clean and sinewy legs, short strong backs, with that projection of the ribs from the spine which is a sure indication of powerful lungs, and consequently of great wind and bottom.

AVERAGE CROPS IN ENGLAND.—The Mark Lane *Express* of October 30th contains a long report or estimate of crops throughout England. Wheat ranges from 16 to 48 bushels per acre, averaging about 30 bushels. Barley, from 24 to 56, with an average of some 36 bushels per acre. Oats, reported crops from 16 to 96, averaging 40 bushels per acre. Beans from 18 to 48, average 32 bushels. Peas average 32 bushels per acre. Turnips from 16 to 28 tons per acre.

POMOLOGICAL.—Persons interested in the cultivation and progress of fruit-growing, will find many interesting facts and suggestions in the extracts we give to-day from the address of the Hon. M. P. WILDER, before the American Pomological Society, at Rochester, last autumn. There is still room for *profit* as well as pleasure, in the planting and nourishing of fruit trees, and winter is the time to select locations and desirable varieties for spring planting.

FENCES.

Few persons have given themselves the trouble to investigate and ascertain the cost of fences in a single township, even, of our State; they know that fencing materials are scarce and costly, and that a set of post and rail fence, of the most thorough character, will scarcely last a single generation; yet it would seem that too little consideration is given a subject of so much importance. As Charles Lamb, or somebody else said, that a "thing of beauty is a joy forever," so a good stone wall is a fence forever. If a trench is dug so as to prevent severe action of the frost underneath the stones, a common balance wall well laid up will keep in pretty good condition for a hundred years, on lands not badly thrown by frost. This is a stability which justifies considerable care and expense in the construction.

On some low grounds, we observe that willows are used by being planted three or four feet apart, and rails or strips of board nailed to them. This will answer very well where lands are not to be plowed; but where plowing is necessary once in six or eight years, marginial trees are the worst kind of posts. On alluvial land, the roots of maples and oaks will extend themselves a hundred feet, and willows and elms more than two hundred feet; so that if the trees stand within twenty or thirty feet of each other, the roots will become so strong and interlaced as to make plowing a difficult and expensive, if not an impossible, process. Wherever stones can be obtained at moderate cost, there can be little doubt that they compose the most economical material we can use.

Much may be saved by fewer divisions on the farm. A five acre lot is small enough, even on a small farm; and on a large farm, twenty acres in a single lot are better than ten. The orchard should be compact; if it is thought absolutely necessary that the cattle should annually have possession of all the mowing fields to crop the fall feed.

SINGULAR WHALE FIGHT.

We mentioned, says *The Northern Ensign*, that a whale sixty-two feet long had been picked up at sea, and taken ashore at Nybster, some twelve miles from Wick, Scotland. It seems, from information on which we can rely, that the whale was not, as was popularly supposed, drifted dead from the Greenland seas, but that he had fallen, only the previous day, in a single combat between himself and another monster of the seas. The conflict, which took place about a mile and a half from the shore, and which was witnessed from the land by a number of fishermen and others, is described as having been protracted and bloody. The two monsters kept battling with each other at times with their heads, and at times with their tails, raising a tremendous spray for a distance of many yards. After a fierce and close encounter, they would each retreat for a considerable distance, and after a brief rest they would again meet in collision, approaching each other with locomotive speed, at the rate of some fifty or sixty miles per hour. On recovering from the stunning effects of such a sudden attack, they would again resume the hand to hand fight, rising up into the air, springing up distances of from twenty to thirty feet, and coming down on each other with fearful violence. Meanwhile, the sea for a great distance round about had assumed a bright red color, indicating that an immense amount of blood had been shed. Other animals appeared to have fled from the scene of the engagement, even birds kept at a distance from it. For three hours the battle was prolonged, at the close of which, one of the whales became motionless, and the other retired from the field of battle. The next morning, as early as four o'clock, the whale referred to was found not far from the spot where the engagement took place; and from various marks on his body, including a broken jaw bone, there is no reason to doubt that he was one of the two belligerents of the previous afternoon. The body gave every indication of having been very recently alive.

For the New England Farmer.

TREES BY HIGHWAYS AND RAILROADS.

The subject of trees beside the highway and railroads and all public places, seems to be creeping into the public mind gradually every year. A move was made in the Essex Agricultural Society, during the last year, to plant forest trees on all public grounds, and beside the highways throughout the country, offering a premium for the best plantation. The subject was agitated a little, but as there was no plan sufficiently digested, the question was dropped.

It appears to me that the subject need only to be fairly and clearly presented, to receive favor. With a view to economy and profit, the subject claims the attention of the whole community. This consideration alone, if rightly viewed, would induce the owners bordering on the highway to improve so much of their lands as would be put to no other use, and which would be otherwise useless. The locust would, in twenty years, become a tree worth at least one dollar, if it should be wanted; and they might be so planted that the beauty might not in the least be marred, say by cutting every other, and planting a new tree in its stead. I mention the locust because it is said not to diminish the productiveness of the neighboring lands, and is a rapid grower.

What would more enhance the beauty of the roads, railroads as well, than having them lined with ornamental trees? What would serve to distribute the snow more uniformly in winter? The opening and clearing the roads has become a very burthensome expense to the public; this would, in a great measure, be avoided; the labors of the last winter will long be remembered. The effect which such a forest, if generally planted throughout the country, would have upon the health of the inhabitants, ought to be a weighty consideration, as it is well known that growing trees absord certain portions of the atmosphere deleterious to health. The delightful effect which such a thing would have upon all travellers, ought to be sufficient alone to induce the accomplishment of it. Who wants to

view a picture, a landscape, that has not trees and shrubbery upon it? The private residence, the village, and all public grounds, have their appearance as well as value enhanced a hundred per cent. by the addition of trees ornamental.

If all these considerations are not sufficient to induce the public to attend to the subject and practically improve the opportunity and privilege of doing honor to themselves, and likewise secure the gratitude of every wayside traveller, they must be blind to their best interests. If we have any desire to live in grateful remembrance by our posterity, and those who shall come after us, nothing can be more suitable and more lasting than a plantation of forest trees beside the road adjoining the homestead, or on the public squares, of which there are more or less in every town. The railroads are well adapted to fruit trees, as they are so perfectly protected from cattle, who are the greatest enemies that fruit trees have to contend with.

Now let the county of Essex have the honor of taking the initiatory movement in this project; let some generous and high-minded individual make a donation for the purpose, and live, at least, a hundred years after he is dead in the grateful remembrance of all those who are endowed with wisdom and good taste, who can appreciate the pleasures, not less than the pecuniary interests of those who are to come after us. M.

Essex Co., Dec., 1856.

For the New England Farmer.

THE HORSE QUESTION.

Prove all things, hold on upon that which has proved good, is a sentiment worthy to be regarded at all times. I was pleased to see in your last paper, Mr. Editor, your intelligent friend from the Empire City coming forward as a volunteer in support of the horse on the "trotting course," at our shows; though I must say he has been treated rather shabbily in your columns—you having burst every bubble that he inflated. I was not a little surprised that he should use as witnesses in his case, "Gineral Lection" and "Gineral Muster," two characters that I well knew fifty years ago, as they annually appeared on Bullard's Plain, Andover West, and Porter's Plain, Danvers North, and in many other localites. Their character is too well known to be entitled to much regard. As your correspondent derived his first impressions of the horse from "moose country," it is not surprising that he should look upon a fast nag with admiration; and be struck with astonishment at the speed of the animal that carried Adjutant Lawrence so quick, to sound the alarm when the "Regulars were coming." Let those things pass; they happened when fast nags and fast men veered round at the same point, and little was done, until the beer was handed round. "When wine is in, wit is out," is as true now, as it ever has been. Neither fast horses nor prancing girls are wanted in the villages of New England. No modest female can be quite satisfied with herself, after she has been making a display on a race-course, in the presence of a motley group of men, coarse in speech and behaviour. The delicacy of their nature forbids this. It is impossible that they should not feel humiliated by such exposure.

Where there is racing, there will be *betting*, and *drinking*, and other *gambling*; and where these things are, there must be corruption, to some extent, at least. Tell of restraining these thing by a supervisory committee. Three chances out of four, such committees will be the very ones to encourage them.

I am glad to see that the Board of Agriculture has taken up this subject, and appointed a committee to report thereon. Who they are, I know not. But this I do know, if they do not take a full view of the subject, and report truly, as things come to their knowledge, they will be in danger of knocking away the stool on which they stand. The public attention is fully awake to the subject—from Maine to Michigan the alarm has been sounded; there is scarcely an editor that does not pass the word; and none with more grace and propriety than yourself. ALMOST SEVENTY.

December, 1856.

For the New England Farmer.

USE AND RESULTS OF GUANO.

MR. EDITOR:—The introduction of guano into Maryland, and the tide-water region of the lower States, has produced effects which entitle it to rank as an era in their domestic and agricultural history. But few years have elapsed, since the first cargo was stacked on the wharf at Baltimore, and made the subject of timid and incredulous experiments upon plots of vegetables, in the truck fields of the market gardeners. The wise ones shook their heads; but here and there, a venturous villa-resident scattered a few hundred pounds as a top-dressing on his lawns. Now and then, some *con amore* citizen farmer varied the course of his experiments, by drilling in a small quantity with his wheat.

The new fertilizer was found to possess remarkable power. The lawns of one experimenter were a wonder of fresh luxuriance, and his grain crops were doubled in their yield, while his neighbor accomplished but the scorching of his grass, and the killing of his seed. Meanwhile, the conflicting reports ran from mouth to mouth, and tales of wonder, no-wise cooled or sobered in the transmission, found their way to the interior. The country papers began to herald surprising accounts of vegetable growth, and the dimensions of guanoed beets and turnips verged closely upon the fabulous.—Quiet old planters, as they disposed of their crops, and made their purchases, in the market towns, listened, with incredulous wonder, to the strange tales which merchants and clerks took waggish pleasure in relating.

More guano was brought, more experiments were made; parcels were scattered among the commission houses of the interior towns, and next year, the old planter not only listened to tales more marvellous and mythical than those of the preceding season, but was enabled to see and handle the mysterious stuff. Curiosity was thoroughly aroused; and while the merchant retailed his stock of marvels, the planter examined anew. He looked, felt, and tasted, (smelling he could not well avoid,) and finished by purchasing a sack, to take out to the old farm, and there settle the matter for himself. Once at home, the treasure was exhibited. Wife and daughters, sons and servants, gathered about the brown sack, to gratify their curiosity by a careful investigation. Wife and daughters re-

treated precipitately from the powerful perfume. Sons doubted like philosophers. Cuffee, eying the thing from a safe distance, gave vent to his thoughts:

"He tink him great ting; him *do* smell powerful, dat sartain; dis yer chile do no what cum of 'im; right smart heap of sumting do, I'se reckon."

The stuff was sown on a patch of the fallow, and even from the first springing of the tiny blades the effect was apparent. That patch was the "observed of all observers;" the family talked of it by the hour; the planter took his neighbors to look at it; no wanderer who sought shelter from the night beneath his roof, was permitted to go forth without a sight of the new wonder. When at last, the crop was ripe, and the extra product of the guanoed portion was duly measured, then the arithmetical skill of the family was called into requisition, and it was found that the sand-hills and pine-nurseries of the old plantation concealed a fortune, which it needed but the application of guano to transfer to the pockets of the planter.

So guano was introduced, and so its use became general. Old fields were cleared, dwarfed pines were reduced to ashes, and wheat was grown, where, for years, to have sown, would have wasted the seed. The result, so far, has been important and widely interesting; but it is doubtful if the bearings of this agricultural revolution have yet been as carefully studied as they deserve. Fortunes have been made by lucky adventurers, lands have rapidly advanced in price, servants have doubled in value, and, from a drug in the market—hiring at $50 per year—are now eagerly sought at prices varying from $100 to $150. All branches of industry have been stimulated to new life and activity. Wagons laden with the increased products of the grain fields, blocked the streets of the market towns. Millers and forwarders were overwhelmed with business, and the banks drained to pay for wheat. These things are cheering, but the end is not yet.

That the increased demand for labor, and its added value, which has doubled the price for servants, and rendered the slave system once more profitable in the Old Dominion, has had no small effect upon her citizens is very probable. That these results have added to the tenacity with which she clings to the system and its interests; that they have tended to make the principles of her earlier statesmen unpopular within her borders, and have rendered almost dangerous the avowal by individuals of those sentiments toward the institution which were held and spoken by the excellent Washington, seems, at least, to be very certain.

But these are questions for the consideration of politicians and statesmen; they are questions of interest, 'tis true, but at this time and place, not in my province for discussion. I have said that the end of the guano dispensation is not yet; and such is the fact; but even now, as through a mist, we are able to descry in the dim distance, what is to be its probable termination. The old fields are poor in organic matter, they are barren of vegetable humus, and the returns of guanoed fields are growing less, while "no guano, no wheat," has become a proverb. Taking as a guide the upper tide-water region of Virginia, i. e., that portion drained by the Rappahannock and Potomac, we find that, with an increased supply of the fertilizer, there is a decrease in the production of grain. The dealers of Fredericksburg, during the last season, paid to the farmers around their town some $600,000 for wheat, and received from them $300,000 for guano. Throughout the State, the crop of this year is a failure, probably not averaging over 6 bushels per acre; this result is partially attributable to the ravages of the chinch bug, and other pests, but planters every where complain that guano has lost its charm.

Such is the fact, and those fields which have been successively guanoed and cropped, until at last they have failed, are near enough to a hopeless sterility. Yet there is hope, for there are yet means by which the soil may be renovated. It can be done by the turning under of green crops, especially peas and clover, by a careful attention to the growth of the grasses, and by the production of manures with extended flocks and herds. This course is practicable; and that it will at last be pursued, seems indicated by instances of individual experiment and success, which are scattered throughout the country. But this must be the work of years, for it will involve the sweeping away of opinions and habits which are the growth of centuries, and have acquired a stubborn fixedness.

Virginia is a good field for northern immigration. She has a soil, worn, 'tis true, yet easily improvable, the most genial of climates, and very palpable natural advantages. Were it not for the unfortunate existence of that institution, which is with good cause so distasteful to northern sentiment, she would be a most inviting field. But Virginia has arrived near to a turning point in her history. She will either go on to a gradual revolution of her whole agriculture, a revolution of progress and improvement, which will evolve new modes of thought and new social aspects, finally making her, in an eminent sense, a "goodly land," or, by a hopeless retrogression, her fields will be again and more fully given up to pines and sassafras, her lower classes to rum and ignorance, and her patricians to a struggle with narrowing means, depraved tastes, and a false position.

REMARKS.—The pages of the *Farmer* will bear evidence that the *facts* so clearly stated by our correspondent, have been *our theories*, for some years. We had not—as he has had—the means of of eliciting the facts; but, reasoning from analogy, we had no doubt that such as he describes must be the influence of guano in the soil, viz., an undue stimulus to the vegetable, and perhaps mineral matters already in the soil, and a consequent weakness and inactivity. We commend the article to every reader interested in the subject of guano.

PENNSYLVANIA GERMANS.

It is well known that this large class of the population of the "Keystone State," while remarkable for their industry, thrift, and good order, have never been quite up to the average of their fellow-citizens of a different origin, in respect to intelligence, education and enterprise. The reason of this fact is well stated by the editor of a German paper published in Buffalo:

The Pennsylvania German farmer of the present day presents to us with but little change the grade of cultivation brought over by his forefathers, a hundred and fifty years ago. At that period the Ger-

man farmers were mere serfs; public schools were then not to be thought of in Germany; such a thing as a German literature hardly existed; and even Frederick the Great spoke French, because the German language appeared to him a language only fit for barbarians. As that time there was no Lessing, Schiller, Goethe; no Kant, Ficthe, Hegel. The influence of political revolutions, of the great modern inventions—the steam engine and the telegraph—even of the printing-press, was not then felt.

The immigrants came over here with their priests, a fragment of the middle ages—uneducated, uncultivated. What is the consequence? We see before us the petrification of a social and mental condition which has long since disappeared from Germany. We behold a picture of the dark and gloomy middle ages. It is, however, gratifying to know that this state of things is fast disappearing. Free schools are extending their influence more and more every year, and the rapid development of the immense mineral resources of the State is giving a marked impulse to the spirit of enlightened enterprise. The various branches of the Evangelical Church are also diligently engaged in planting the institutions of the gospel in every nook and corner of the territory, and all experience shows that the influence of the gospel in favoring the intellectual elevation of a community is second only to its efficacy in securing the salvation of the soul.—*Intelligencer.*

For the New England Farmer.

AGRICULTURE AT THE SOUTH.

While residing recently in one of the Southern States, I could not help thinking of the superior independence of a farmer on New England soil, even with a small farm and with small means, compared with many a planter, his broad plantation and scores of negroes. I verily believe the proprietor of a cottage and ten acres of land in Vermont, with a willingness and a disposition to work, can have more of the "comforts of life" and advantages of education for his children than a majority of Georgian planters, who own land and slaves to the amount of thirty or forty thousand dollars. Why is this?

It is partly owing to the inefficiency of slave labor; partly to the fact that the white persons comprising a planters family, from their indolent habits, are mere consumers; in some degree to the high prices which must be paid for all manufactured articles, but most of all, to the very imperfect system of farming which prevails almost universally.

Most of Georgian and Carolina farmers, as far as my observation extended, never make, save, nor apply any kind of manure. Land is cultivated, or rather cropped, as long as it is capable of producing anything, without regard to rotation, and then left common, making what is termed "old fields."

The area of this worn-out land is rapidly extending itself, planters seeking some new spot, again to practice the same exhausting process of tillage.

Farming tools, that belong as far back as the seventeeth century; plowing, that merely scratches the surface; overseers, who have no intelligent notions of agriculture; slaves, who *care* not how their work is performed; absence of home markets for fruit and other perishable products; the frequent and entire loss of crops upon land shallowly plowed in seasons of droughts,—are a few of the disadvantages and features common to Southern farming.

I could mention the names of many planters, who, though called wealthy, would be unable to meet their current expenses, if they were not able, occasionally, to sell a negro so as to replenish their empty purses. Such are generally the occupants of worn-out soil.

Who would be willing to exchange his New England home for a life of indolence and ease in the sunny South? Who would barter social, religious and educational privileges, for the sake of being an isolated occupant of leagues of soil, and an absolute monarch to a drove of slaves? OPERARIUS.

Barre, Vermont.

THE PUBLIC LANDS.

The President's Message discloses the enormous extent to which speculation in the public lands has been carried for a year past. In round numbers the quantity sold is stated at 9,200,060 acres, and the land warrants issued have been for 30,300,000 acres, making in the whole 39,500,000 acres. Most of the warrants find their way into the hands of speculators, and are finally sold at more than double the price of those sold by the government.

The largest amount ever disposed of in any former year, was in the great paper money expansion of 1836. The sales that year reached nearly 21,000,000 acres, while this year they have gone up to nearly double that amount. It is much to be regretted that a more healthful and prudent system of selling the public lands is not adopted, so that they might be kept open for many years to come for the exclusive benefit of actual settlers. From the manner in which the disposal of them has been pushed forward by politicians, this has, however, become impossible, and in a few years all the good lands owned by the government will be in the hands of the speculators, and held at speculators' prices. This will be likely to check the growth of the new Western States, and operate injuriously upon the welfare of the whole country. The exhaustion of the cheap government lands, and a restoration of good crops of breadstuffs in Europe, would make excessively hard times in our western grain-growing States, especially as emigration is likely to be checked, in consequence of Ireland having been fully relieved of her surplus population, and the discontent among the German nations having in a great measure passed away. The inducement to emigration from the other States will also be greatly lessened, after the price of lands in the new States have been put up to speculating prices, and it will be much more profitable to buy and cultivate a farm in many of the old States, at say $30 an acre, rather than to buy wild land in Kansas or Iowa at $5 to $10 an acre.

It is believed that but few persons in the northern and middle States have purchased lands in the new States, for speculative purposes, but that they have mostly been taken by capitalists in the Western States. Those who have accumulated large fortunes by the rise in the price of lands in States where the government lands have been nearly or quite sold out, have invested their gains in lands in the new States. One capitalist in Ohio holds *eighty thousand acres* of the most valuable land in Illinois; and in the State of Ohio there is not a county where

there are not numerous holders of lands in Illinois, Iowa, Wisconsin, Nebraska and Kansas.

The years of the greatest speculation in western lands have been 1835, in which 12,566,000 acres were sold; 1836, in which the sales were 20,074,870 acres. In 1855 the land sales again rose to 12,000,000 acres, and in 1856 to 40,000,000 acres.

After the great speculations of 1836, the sales fell off in 1837 to 5,601,103 acres, in 1838 to 3,416,907 acres, and in 1841 they sank as low as 1,164,796 acres.

The average sale of lands from 1832 to 1852, inclusive, was 4,920,000 acres per annum, or *one fifth* only of what was marketed in the last fiscal years. With the issue of land warrants, under the acts of 1852 and 1854, the speculations again recommenced, and have now reached the present unparalleled amount.—*Traveller.*

POMOLOGICAL ADDRESS.

Amidst the rapid strides of the arts and sciences in our time, it is gratifying to know that Pomology has not been stationary. Few subjects exhibit so remarkably the progress of civilization and improvement as the cultivation of fruit. It is now only about a quarter of century since the establishment of the oldest horticultural society in America.—Then, these associations were few and feeble; now they are numerous and influential, extending from the British Provinces to the Gulf of Mexico, and from ocean to ocean,—all working together in harmony with each other, and aiding our association, whose field is our national domain. The fruit crop of the country was not deemed worthy of a place in our national statistics; now it exceeds thirty millions of dollars annually, and is rapidly becoming one of the most valuable and indispensable products of our Republic. Then the sales of fruit trees were numbered by hundreds, now by hundreds of thousands. Then choice fruit was a luxury to be found only in the palace of the opulent; now it helps to furnish the table of the humble cottager, and comparatively few are the hamlets which are without their fruit tree or grape vine.

It is only eight years since the organization of this Pomological Society; now kindred associations exist in various districts and States, and are exerting a powerful and salutary influence.

This improvement is full of promise, and encourages us to greater perseverance. When we look back to the days of Duhamel, Miller and Forsyth, we perceive that we have made laudable progress. When we compare those numerous splendid varieties which we have obtained with the limited catalogues of the first part of the present century, we may well be proud of our actual knowledge. From the days of Henry Fourth of France, when his favorite Bon Chretien was almost the only good pear; from the time of Queen Elizabeth, who sent to Holland to obtain lettuce for her royal table, down to the present century, there has been a gradual advance, but in our day it has indeed been astonishing, and still our course is onward and upward.

* * * * * *

When Van Mons, the patient and skilful observer, was successfully expeimenting in Europe, our Coxe, Prince, Lowell, Dearborn, Manning, and others, had commenced their course, and obtained some good results. Then most of our pears were propagated on suckers taken from the forest; now we see millions of young vigorous trees cultivated, sold, and planted in all parts of the Union, and where twenty years since not a single specimen of the Pyrus was to found. The public no longer ridicule the man who plants a tree with the hope of gathering its fruit with his own hands, or the saving of seeds to improve the quality of his fruits. True, Van Mons was ridiculed all his life, and only appreciated by such pioneers as Davy, Poiteau, Diel and Drapiez. His nurseries were thrice destroyed, as wild, worthless thorn bushes, under the false pretence of "public utility." This was an irreparable loss, for however much his system be discussed and distrusted, it is still true that the results of his experience have been most beneficial to the world.

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By the reports from individual fruit growers, and from associations, it appears that some varieties of the pear succeed equally as well in the extreme south part of our Union as in the north. A gentleman from Oregon Territory recently informed me that settlers there had already provided themselves with extensive orchards, and from which they gather fruits of great size and excellence. He also makes a similar report in relation to Washington Territory, and instances among others an orchard of one hundred acres, which is now yielding a large annual income to its proprietor.

* * * * * *

When we consider the progress of the grape culture in the single State of Ohio, and its great increase in other States, amounting now to more than two millions of dollars annually—the immense quantities of peaches and strawberries brought to our markets, the rapid multiplication of the apple, the pear, and other fruits throughout our land, and the millions of trees annually sent out from this vicinity and other parts, it is not easy to calculate the future importance of fruit culture, whether viewed as a means of furnishing luxuries for our table, or articles of domestic and foreign commerce.

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In respect to the best method of obtaining choice varieties from seed, I urged you "to *plant the most mature and perfect seed of the most hardy and vigorous sorts.*"

Additional experience has confirmed my faith in this doctrine; for, where seeds have been obtained from cross fertilization of healthy and strong growers, the progeny has partaken of the same character; but, where the parents have been of slender habit, or slow growth, the offspring have exhibited corresponding qualities. If this fact may be relied upon, though the process of artificial impregnation be difficult and tedious, yet, pursued with skill and perseverance, it will ultimately secure a rich reward. We should not be disheartened by the poor success of Duhamel, or of Mr. Knight, with his hybridized pears; for the failure of the latter is attributable to the selection of inferior varieties, from which his seedlings were raised. In reliance upon natural fertilization, I would still encourage the continual planting of the seeds of choice varieties of all kinds of fruit, in the belief that new and valuable varieties may thus be obtained. By these various processes, we shall have continual accessions to our collections of such choice fruits as the Beurre Clairgeau, Beurru d'Anjou, and Doyenne Boussock pears.

Let nothing discourage you in this most hopeful department of pomology. Go on, persevere;

"Give new endeavors to the mystic art,
Try every scheme, and riper views impart;
Who knows what meed thy labors may await?
What glorious fruits thy conquests may create?"

These are triumphs worthy of the highest ambition, conquests which leave no wound on the heart of memory, no stain on the wing of time. He who only adds one really valuable variety to our list of fruits is a public benefactor. I had rather be the man who planted that umbrageous tree, from whose bending branches future generations shall pluck the luscious fruit, when I am sleeping beneath the clods of the valley, than he who has conquered armies. I would prefer the honor of introducing the Baldwin apple, the Seckel pear, Hovey's Seedling strawberry, aye, or the Black Tartarian cherry from the Crimea, to the proudest victory which has been won upon that blood-stained soil.

* * * * * *

Time admonishes me to be brief, but I cannot refrain from alluding to *the appropriate location, soil and treatment of fruit trees.* These are subjects surrounded with mystery, and which can be relieved only by study and personal experience. The importance of thorough draining, and perfect preparation of the soil have not received the consideration they deserve; especially where its silicious character does not furnish a ready natural conductor to superfluous moisture. Thorough draining lies at the foundation of all successful cultivation. In cold, wet, undrained grounds, the disease of trees commences at the root, which absorbes injurious substances, and the tree ceases properly to elaborate its nutritious matter. Wherever there is an excess of water, and consequently too low a temperature, and the soil is not properly drained and thoroughly worked, the vital energies of the plant are soon impaired, and its functions deranged. I am inclined to think that death by drowning is quite as common in the vegetable as in the animal kingdom, with this difference, that it is not so sudden. How many of the diseases, such as the spotting of the leaf and fruit, the cancer, fungi and decomposition of the bark, are attributable to this cause, it is not easy to determine. Perfect drainage, which should always be accompanied with subsoiling or trenching, permits the air and light to penetrate and sweeten the soil, warms it, and prepares its latent fertilizing properties for the nourishment of the plant.

A writer in the Journal of the Royal Agricultural Society of England says: "I have frequently found the soil of a *well-drained* field higher in temperature from 10 to 15 degrees than that of another field not so drained, though in every other respect the soils were similar." Another advantage is, that vegetation seldom or never suffers from the drought, where the soil has been properly drained and worked.

The necessity of thorough drainage and perfect pulverization of the soil, is not less for fruits in open cultivation, than for the grape under glass, where one of the pre-requisites has ever been the perfect drainage of the border.

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My experience has so often been solicited by private communication in relation to *the pear upon the quince stock*, that I deem it proper to introduce it in this connection, with the reasons on which it is founded. Many varieties of the pear thus grafted grow vigorously, and bear abundantly. I am aware that an impression has prevailed in the minds of some, unfavorable to the cultivation of the pear on the quince stock, an impression which must have arisen from an injudicious selection of varieties, or improper cultivation. In this opinion, I am happy to know that I am sustained by Mr. Barry, in his address before the North Western Association of Fruit Growers in Iowa, and by other distinguished pomologists. Pears upon the quince should be planted in a luxuriant deep soil, and be abundantly supplied with nutriment and good cultivation. They should always be planted deep enough to cover the place where they were grafted, so that the point of junction may be three or four inches below the surface. The pear will then frequently form roots independently of the quince, and thus we combine in the tree both early fruiting from the quince, and the strength and longevity of the pear stock.

For instance, of trees of the same variety, standing side by side in my own grounds for ten years, and enjoying the same treatment, those on the quince stock have attained a larger size, and have borne for seven years abundant crops, while those upon the pear stock have scarcely yielded a fruit. We have, also, others on the quince, which twenty-five years since were obtained at the nursery of Mr. Parmenter, where now is the most populous part of the city of Brooklyn, N. Y., and which have borne good crops for more than twenty years, and are still productive and healthy.

That the introduction and cultivation of the pear upon the quince has been a great blessing, I entertain no doubt, especially in gardens, and in the suburbs of large towns and cities. And as to its adaptation to the orchard, I see no reason why it should not succeed well, if the soil, selection and cultivation be appropriate. A gentleman in the eastern part of Massachusetts planted in the years 1848 and '49 as many dwarf pear trees as he could set on an acre of land at the distance of eight by twelve feet, and between these rows he planted quince bushes. In the fifth year from planting he gathered one hundred and twenty bushels of pears, and sixty bushels of quinces. Of the former he sold seventy bushels at five to six dollars per bushel, and he now informs me that he has lost only three per cent. of the original trees, and that the remainder are in healthful condition.—*M. P. Wilder's Address at Rochester.*

ILLINOIS STATE TRANSACTIONS.

Through the politeness of the Secretary of our State Board of Agriculture, we have received the first volume of the Transactions of the Illinois State Board of Agriculture, occupying a period of two years, 1853—54.

Among the interesting papers which it contains, is one by B. P. JOHNSON, giving a brief history of the agricultural associations of this and other countries; the annual address for 1853, by Prof. TURNER, together with a plan for a State University; capital addresses by WILLIAM S. WAIT, before the Hillsboro' Society; by E. R. ROE, before the Mo-

Lean county society; J. A. WIGHT, before the Tazewell county society, and another at the North Western Fruit Grower's Association. It also contains essays on the science of agriculture, the pear and its culture, transplanting evergreens, culture of the grape, wine culture and wine making; on veterinary science, origin and character of prairie soils, on insects, air currents, flax, swine, birds, implements, and other subjects. The volume contains much valuable matter, and will undoubtedly be useful to the people of the State. There is room for considerable improvement in the printing, and if one-fourth of it were entirely omitted—being mere lists of entries or premiums—the volume would be improved and a considerable expense saved. We may well refer them to the volumes of Massachusetts Transactions, as models in these particulars.

For the New England Farmer.

PEACH AND PLUM TREES.

Peach trees, having so frequently failed of late in giving good crops, are rooted up or neglected by many cultivators, in regions where the winters are severe. Nevertheless, I think there is more hope of them than of plum trees. The winter of 1854—55 was so intensely cold, that nearly all the buds of peach trees were killed throughout New England, and in the spring, they could be shaken or rubbed off easily with the hand. Is there no remedy for this evil? I know of no certain remedy, so long as they stand out of doors. Some that may be particularly sheltered by buildings, may more frequently escape than others. Or if we can adopt some method by which the roots of the peach tree may be kept warmer, I think we might find, at least, a partial remedy.

I have several times noticed, that old peach trees, neglected and grass-bound, bear more or less most every year, though much could not be said of the fruit. But the buds could not have been killed by frost, and this is important. Are not the roots of a tree partly covered with sod (living sod, firmly knit together,) warmer than those in loose, unprotected loam? And if so, is not the sap in the branches at a higher temperature, and consequently, are not the buds less likely to get killed? The temperature of a living tree is never so high or so low as the surrounding atmosphere—keeping within the compass of from about 40 to 60 or 70 deg. Fah. A tree, in short, is a pretty accurate representative of the warmth of the soil in which it stands.

But I imagine the reader asking, "Would you let the soil around the peach tree run to sod?" No; I would keep the earth well tilled, and apply the artificial sod, or something as good or better, in the fall. Mulch them with hay, straw, or potato vines; by which means the earth will be less under the influence of the cold, and the buds may be saved. At any rate, the trees will not be injured thereby, unless the mice should be collected and tempted to spoil their teeth on the rough butts—which, if feared, heap up a little earth.

To raise peaches in New England, a favorable position is important. Elevated land, with a slope to the west, I should prefer for the trees, as the east winds cannot touch them, which seem to be worse than the north. This is the position of my garden, and the past year I had several of my most advanced trees loaded with fruit, which was a rarity in the community.

Seedling peaches have done well with me, and some of my oldest are such. Out of seven which have borne, only one has proved a cling-stone with firm flesh. The rest are good or excellent.

The practice of heading in peach trees in the summer or early fall, I think important; yet some trees are naturally heavier and earlier bearers than others. Crawford's Late is rather shy, yet the Late Admirable bears early and abundant, and the fruit is large and handsome, with a delicate blush, and in quality is decidedly champaigne.

Plum trees are sinecures. That worse than Egyptian plague, the curculio, takes all the fruit. A silent and unseen enemy, there seems to be no stratagem yet discovered to keep it at bay, or to foil its Indian mode of warfare. Three trees of mine, which set full of fruit, only produced two plums! Yet they had been frequently treated with lime, also salt and water. A brood of chickens under a tree is a partial preventive; but something better yet must be discovered, else plum trees must be reworked with peaches, or rooted up as cumberers of the earth. I have a few more resources left, which will be tried before capitulation.

West Medford, Dec., 1856. D. W. LOTHROP.

WILL TURNIPS FATTEN PORK?

Having been successful in raising a good crop of English turnips, I hardly knew in what way I could dispose of them all, when a neighbor informed me that an acquaintance of his told him he had found English turnips, washed clean, boiled and meal mixed with them, to be excellent for fattening hogs, &c., that he had tried them, and could also recommend them. Notwithstanding I have confidence in their judgment, yet I could hardly suppose that English turnips possessed very largely of fattening material for swine: but have commenced feeding mine with them, and find them eaten as well as potatoes, and from present appearances am not prepared to say they are not equal, although I have until recently thought them worthless for hogs.

Vassalboro', 11th mo., 1856. D. TABER.

NOTE.—The more meal with turnips, the better for fattening hogs. The material contained in turnips is of the muscle making kind, rather than oil or fat making. Turnips will therefore be good for this part of nutrition, and serve to make them fleshy. Ruta baga or Swedes will keep store hogs in good order, but we never knew mess pork made by them, or the flat turnip.—*Maine Farmer.*

LABOR OF THE JAWS.—Baron Liebig's discovery in animal physiology, that the excessive labor of the jaws in the mastication of food, wasted the beast's muscle, and retarded his progress, has been fully confirmed by practice; and instead of feeding, as formerly, upon hay or whole turnips thrown to them, our stock have their food "minced" for them by different descriptions of cutting-machines. Such is the advantage obtained by this mode of feeding, that lambs fed with the aid of a turnip-cutter are worth more at the end of a winter, by 8s. per head,

than lambs fed upon whole turnips, the cost of using the machine being but 1s. per head, and the machine itself not more than £5; thus effecting a saving of 70s. an acre upon the turnip crop.

For the New England Farmer.

HEALTHY BREAD.

Bread is universally acknowledged to be the staff of life; and yet, on no one point among housekeepers is there such a diversity of practice as in regard to the preparation of this highly useful, and, I might even say, indispensable article.

First: there is an unending diversity of opinion, with regard to the material. Thus, a few prefer wheat meal, or that which is unbolted; but the far greater number prefer to have it bolted or sifted. With many, the finer it is the better. Others prefer rye. In very many parts of New England, even at this late day, a large number of the people prefer simple rye bread. With us in eastern Massachusetts, a mixture of rye and Indian is deemed preferable. In a few portions of our country, corn meal is greatly preferred for bread; and in a still smaller section, bread of buckwheat or oatmeal.

Secondly: the methods of preparing bread are as various as the material. The great body of our housekeepers are thoroughly imbued with the idea that all bread must be raised, if possible. They dread *heavy* bread, as they would the plague itself. But they confound heaviness (such as is formed when bread made of very fine flour falls from the upper crust, and is doughy, or rather leady,) with mere solidity. Hence, some device there must be to diminish the adhesiveness of the mass, whether in order to make a large loaf, to encourage that indolence which prevails about mastication and salivation, or to add to the amount of gustatory enjoyment, by bringing more of the mass, with a slighter effort, in contact with the papillæ of the tongue, deponent is not able to say.

One thing, however, he *can* say, viz., that all the forms of raising bread which have ever been invented, so far as he is informed, stand entirely arrayed against pleasure, economy and health. Bread not raised, is, in reality, always sweeter, more economical, and more healthful.

Such a statement I well know, so far as it is received and acted upon, will not please the vast majority of your readers. Especially will it be likely to displease the friends of some of our fashionable effervescing mixtures, such as are frequently advertised in the papers. If bread is to be raised at all, I greatly prefer to raise it by effervescence; and perhaps the "dietetic saleratus," which I see advertised in the papers, the *Morning Post*, &c., may be as good as anything. Yet, I repeat the assertion—although in repeating it, I am well aware that I am in danger of treading rather heavily on the toes of our ancestors on the one hand, or of offending the pride of the present generation—that it is wrong to raise bread, any way. The very argument usually brought in favor of the practice, constitutes its strongest objection—viz., that without being raised, it is not so easily masticated. Why, the harder our bread is, provided we do not break the enamel of the teeth in chewing it, the better. Wheat bread, for example, is *true* bread, just in proportion as it approximates in the degree of solidity to the character of the unground wheat from which it is made.

Granted, that we cannot eat a meal of such hard bread in four, or even in eight minutes, but, on the contrary, are compelled to devote thirty minutes to the purpose; so much the better. God, in nature, never intended a man should eat his meal in five or ten minutes, although hundreds boast that they want no more. The great normal changes on our food, which were intended by the Creator, can never be effected by bolting it; that is, by swallowing several pounds of it in five minutes. Nor do we gain half as much pleasure in this latter way, as we do in the former.

But why, then, should we grind our grain at all? I shall doubtless be asked. For if it be true that the true art of bread-making consists in breaking the *smaller kernels* of the grain, and then moulding them, as it were, into *larger kernels*, or, in other words, into cakes or loaves, why should it be ground at all? By eating it in the kernel, it will be added, we should save ourselves much time and trouble.

The reply to these objections is as follows: In the present highly refined state of society, very few people have teeth of such perfection, as to be able to masticate very thoroughly the smaller grains, as they come from the Creator's hands. And if they could, it is by no means certain that art may not in this respect improve nature. The process of mixing and baking bread, even though all fermentation is, by its rapidity, precluded, seems to increase in no slight degree its sweetness. Whether there is, in such circumstances, a corresponding loss of nutriment, as there certainly is in fermentation, is, I grant, quite undetermined.

The word fermentation will recall another objection, which not a few will be likely to interpose. They will say, "But we always thought bread raised with yeast or leaven was greatly preferable to that which is raised by effervescing, and other mixtures; above all, by saleratus." The latter, of course, is objectionable, as everybody admits; but why the other effervescing mixtures should be preferable to yeast, will not be, by the class of persons to which I refer, so readily understood.

But the chemists can tell them, and this, too, without any very great show of learning, that in all fermentation, there is a change of the saccharine, or nutritious part of the bread, into carbonic acid gas and wine; both of which, and most certainly the last, involve a real loss in the same proportion. This is not all. Yeast, or leaven, not only induces fermentation, and thus induces a loss of nutritious substance, but that fermentation is, practically and really, the first stage of decomposition or putrefaction; so that he who eats raised or fermented bread, eats putrified or rotten bread. At least, it is partly rotten, and can never be so well adapted to the wants of a normal stomach as that which is pure.

My subject is not exhausted, but I have written at sufficient length, for once. W. A. ALCOTT.

Dietetic Institute, La Grange Place, Dec. 10, 1856.

AGRICULTURAL WEALTH OF ENGLAND.—If the mines of California were to produce one million of dollars per week for two hundred years, the amount would be something short of the estimated value of the cultivated lands, with their appurtenances, of old England,—which is said to be $10,860,000,000.

PEARS—A FRUIT ROOM.

Through the kind remembrances of Col. WILDER, of Dorchester, we have from his highly cultivated and prolific grounds the following pears: the *Beurre d'Anjou, Belle Epine Dumas, Beurre Langlier, Winter Nelis, Beurre d'Aremberg* and *Lawrence*. These pears are now, about the middle of December, not only sound, but having nearly all their original plumpness, and freshness of color. These qualities are preserved, we suppose, by the aid of a *fruit room*, after great care is observed in gathering and packing away. In his late address before the American Pomological Society at Rochester, Col. Wilder states that success in preserving fruit can only be attained by having a "perfect control of the temperature, moisture and light;" and that after having built and managed four fruit rooms upon different plans, he is of the opinion that a proper equilibrium of temperature and moisture cannot ordinarily be obtained without the use of ice. This must be gained by an ice apartment above the fruit room, with descending flues for the cold air, so as to preserve an equable temperature and moisture, and hold the ripening process in suspense.

A gentleman from St. Louis has informed us that a room on this principle was constructed in that city several years ago, and that ripe strawberries had been kept in it for the space of six months without any perceptible change in color or taste; that butchers there store their beef in quantities, and that it accommodates large numbers of persons in preserving whatever articles they may possess of a rapidly perishable nature, and which they cannot dispose of at the time. Eggs are brought there in great numbers, packed in oats, in boxes of particular dimensions, and when a sufficient number of these boxes is collected, they are sent to New Orleans and exchanged, a box of the eggs and oats for a box of oranges and lemons; the latter are then taken to the preserving-room, and when the market is quick, occasioned by a scarcity of these fruits, they are sent all over the city by peddlers, or sold at the groceries, as they may prefer. Slaughtered hogs may also be kept there until the market is favorable for profitable sales. Butter made on the Mississippi, and particularly on the Missouri, is brought in barrels, almost by cargoes, and often arrives in a liquid state. It is then deposited in the preserving room, and in three days the hoops may be knocked off, and the staves taken away, leaving the butter sufficiently cooled to be cut up and packed in convenient parcels, or moulded into fancy forms.

It is a matter of surprise that something of this sort has not long since been devised in this city, or neighborhood, where so much beef and pork are packed, and so many delicious and costly fruits are produced. It will scarcely admit of a doubt that a room possessing such qualities for preservation would become a source of profit to its proprietor.

Our informant describes the rooms of which we have spoken as covering quite a large surface, but were low, the preserving room not being more than ten feet in height, and the ice chamber only high enough to admit a sufficient body of ice to keep the temperature a little above the freezing point. The floor descended gradually from the centre to the edges, where troughs received and conveyed away all the water that might drip from the ice.

Comparatively few persons eat a good pear in the month of December. There are always some in the market, even much later than this, but the price of them is an interdiction to most of us. This ought not to be so. But until *apples* become so plenty as to be found on the tables of all classes, we will not *too earnestly* press the matter of the cultivation of the pear—only hoping that all who can afford to do so, will annually plant and nourish a few of the best varieties.

We believe, then, that not only our own State, but the nation, is indebted to those gentlemen who have introduced and tested a great variety of pears, and who are from time to time recommending those that have passed the ordeal of their own personal criticism, or that of the horticultural or pomological societies. There are few more zealous or persevering, or who have accomplished more in this good work, than Col. Wilder. The fruits before us are evidences of his skill. The *Winter Nelis* and *Lawrence* were as near perfection as anything we can conceive of in a pear. Most of the others were more acid, and would therefore be preferred by many.

For the New England Farmer.

MR. SHELDON'S HEIFER.

MR. EDITOR:—It is stated by Mr. S., of W., that the *butter products* of his three-year old heifer have far exceeded those of Mr. Osborn's heifer, of which I gave you notice last month. The facts stated by Mr. S. are decidedly interesting. I wish he had stated about the *size* or *weight* of his heifer, and *the manner in which she had been fed.* No one can better appreciate the necessity of having all such facts distinctly known, than Mr. S.

The *price* affixed for his heifer, $500, gives to his statements an air of romance, for no one can be so *green*, as for a moment to think that $500 would be paid for an *American animal*, without some pedigree attached. Those who pay such sums, pay them for the appendages, more than for the animal. Do not misunderstand me in saying that such appendages are really of any value, but such is the way of the world; and no one understands this matter better than yourself. If Mr. S. had valued his heifer at $200, instead of $500, in my judgment he would have been nearer right. I do not believe it would be wise to pay $500 for any animal of the kind, whatever name she may bear.

December 13, 1856.

For the New England Farmer.

MILLIONS OF DOLLARS.

Mr. Editor:—A few weeks since I wrote a short article, which, with my name attached, was published in the *Farmer*. This was an "adventurous flight" for such a man as I; and the pleasure of seeing my signature at the end of an article in a paper that counts its readers by tens of thousands, I thought was glory enough for me, but it was only a part of my harvest of fame. Immediately after its publication, a letter bearing my address, with the "Esq." most politely added, arrived at our village post office, all the way from New York. Maybe, thought I, as the letter was hurriedly opened,—I thought it very *low*, to be sure,—maybe, I'm getting up in the world! Here, a New York gentleman has been reading the *Farmer*, and my "piece," too, or he would never have known my name. He must have seen something about it that he liked, for he solicits my correspondence. He don't ask a favor of me, as the king did of Pat, when he spoke to him. But it is myself, so he tells me expressly, that is to be benefited. He proposes to admit me as a partner in a very laudable enterprise in which he is engaged, and by which—I have his very words—"millions of dollars will be made." Isn't that *Princely*? A very small share of that sum ought to satisfy the humble ambition of the twenty-acre farmer that I am. And so at last the way to a fortune is open before me! He don't keep "dark" on anything, as the advertisements do, that offer to put greenhorns in the way of making fortunes without work, but he gives me full particulars of the process by which these "many millions of dollars" are to be secured, together with his name in full,—the name of an old man, too, it must be, for he pledges a business reputation of "half a century" for the truth of all he says. The name of my liberal patron and correspondent is William R. Prince. And the "many millions of dollars" will be made by the early cultivators of the "Chinese Potato—*Dioscorea Batatas*, Imperial Rice White Variety." This plant is not only to "supersede every other potato and every other similar esculent, but"—I like to use Mr. William R. Prince's own words—"it will usurp a portion of the position which is now occupied by wheat, corn, &c. In twenty years," he asserts, not prophesies, "our National Statistics will report the value of the annual crop *as greater than the cotton crop*." His own italics.

Now, all I have to do to become a partner in this patriotic enterprise, and to get my share of the "many millions of dollars," is just to send Mr. William R. Prince five dollars, and then Mr. William R. Prince will send me, by express,—I to pay freight, twenty-five potatoes. On this capital of twenty-five bran new potatoes I am to establish a branch of this "many-million-dollar" business, for the especial benefit of myself and of my section of this great country.

Now, Mr. Editor, as my five dollars are very scarce, and as my bu up of faith, the phrenologists say, is nothing but a great hollow, I propose to give any of my neighbors who read the *Farmer*, the "refusal" of my chance in this promising operation.

As Mr. William R. Prince threatens "prosecution and retribution" for "inuendoes" against his potatoes, I wish to declare very carefully that I don't say or know any thing against them at all. They may dethrone cotton; may put wheat, corn, rye and beans out of fashion; may elevate Yankees to a level with the "Johns" we hear of in California, who were raised on the *Batatas*, and do a great many other things, for aught I know. But I do hope Mr. William R. Prince will not "take the law of me" for simply confessing that I do not believe all this. Admitting it to be the most valuable production of the earth, there is to my mind something suspicious in the fact that Mr. William R. Prince claims the "combination of every useful property" in this "vegetable boon."

I should like to know your opinion, Mr. Editor, of this wonderful root. And I should like to know, if you do not think it is "laying it on thick" to send to every individual whose name it is possible to procure, such unbounded recommendations of any new plant, as those which I received from Mr. William R. Prince, of the Dioscorea Batatas? And if such extravagant puffing is absolutely necessary in the business of selling trees and plants, then I wish to inquire whether it is not time to abandon the traffic entirely. For one, I am sick of it.

Winchester, Dec., 1856. S. Fletcher.

Remarks.—Instead of fearing a prosecution, our correspondent has undoubted claims on the gratitude of Mr. Prince, for he has, we think, done something towards gratifying a desire which Mr. P. expresses in a circular we have received from him, that his name shall be identified with the introduction of the Dioscorea Batatas.

Of the virtues of this plant we have no personal knowledge. From such of our exchanges as happen at this moment to lie before us we clip a brief extract from three accounts, which are all we find, of experiments that have been made in the cultivation of this new plant.

The Editor of the *Rural Intelligencer*, Augusta, Me., who planted one of these potatoes, last spring, thus reports the result of his experiment:

"We started it early in our hot-bed, which, of course, is rich as manure could make it, and there we let it remain and grow all summer, sole occupant of the premises after the young plants for which the bed was chiefly made were removed. It grew to its heart's content. The other day we concluded to dig for our peck of huge yams, when, after following the main root down one whole foot, we came across one Diascorea Batatas—one, just one—and that was about as large as a little potato, too small for the pot. We cooked it, however, and found it not a disagreeable esculent. So much for our first experiment."

Mr. J. P. Eames, of Mendota, Ill., writes as follows for the *Prairie Farmer:*

"I prepared the ground by spading and thoroughly pulverizing to the depth of two feet, and planted them the last of April, covering two inches. They came up about the tenth of June. In the course of the summer the vines made a growth of some two feet. The frost of Sept. 20th entirely killed the vines. I have now just taken the roots from the ground. In length they are from 10 to 20 inches. They are the largest at the bottom, and taper regularly to the top. The largest diam-

eter was one inch at the bottom, and one-sixth of an inch at the top. We cooked one of them with pink-eyes of much larger size. The pink-eyes baked in 35 minutes, the Chinese potato in 60. In flavor it somewhat resembles the Irish potato; but is not, in my estimation, at all to be compared with the best varieties. It leaves a slightly disagreeable, pungent sensation in the mouth."

Mr. VERRY ALDRICH imported from France, last spring, among other things, five Dioscoreas. They were planted in his garden. The following extract from his communication to the *Prairie Farmer* gives the result of his trial:

"They came up in due time after planting, grew, looked, and ran up a stake like our wild morning glory—first frost killed the vines. They were harvested a few days ago, and the entire crop is seven potatoes—if they can be called that—from nine to fifteen inches long, about one-third of the lower end of the largest swelled out to about three-fourths by one inch, the upper end the size of a large pipe stem. They ran down perpendicularly and have to be dug with a spade. The whole crop would not make half of one meal for any well man."

Well, we have not planted, and watered, and dug the Dioscorea, and taken it up tenderly at the table, and tasted and tested, and commented on its merits—we do not know them, we confess, and shall not, therefore, condemn. But if it is so excellent a root, and it has not cost Mr. P. a "mint of money" to introduce it, it does seem to us that the conditions of getting hold of it might *be a little easier.*

For the New England Farmer.

SHEEP ON SMALL FARMS.

MR. EDITOR:—I send you a few facts about the profits of keeping sheep on small farms. I have a small hard farm, and keep but a small stock, say one horse, one yoke of oxen, six cows, and six sheep. I let them all feed in the same pasture together, only reserving a field of about two and one-half acres of very high land, exclusively for the sheep and lambs; and when I open a new lot in the fall, I do not allow the sheep to share in it. In the winter, I feed my sheep plenty of meadow or swale hay, until about the time of casting their lambs; at which time, I give them English hay, or rowen, with a small quantity of corn. I cannot boast of large fleeces, but range about four pounds. Last winter, I kept six ewes, from which I obtained about

24 lbs. of wool, sold at 35 cts.	$8 40
Eleven lambs, sold ten at	37 50
The one kept is worth	4 00
	$49 90

Haverhill, Mass., 1856. DANIEL WEBSTER.

BENSON (Vt.) FARMER'S CLUB.—The first exhibition of the *Benson Farmer's and Mechanic's Club* took place on the 23d of October. A writer in the Rutland *Herald* states that the exhibition of stock was large and excellent. So of the dairy and manufactured articles. HENRY CLARK, Esq. of Poultney, delivered the Address.

HINTS FOR WINTER.

The following communication from Mr. E. Meriam, the Brooklyn meteorologist, to the Portsmouth *Journal*, will be read with interest. The fact that Mr. Meriam makes *hourly* observations of the state of the temperature night and day, summer and winter, has been remarked upon by the press as a singular instance of devotion to science. What will these astonished *quid nucs* say, when they learn that our philosopher steps hourly from his warm bed into the freezing out-door atmosphere, with no protection but "a thin cotton night dress and slippers!"

A temperature of 60 degrees the year round would be comfortable; it is the changes that are complained of, but these changes are healthful. Among my gathered changes of temperature, Franconia, N. H., has a prominent place. There, the temperature changes more suddenly, more frequently, and a greater number of degrees than in any other place with which I am in correspondence, except Australia, in the first and last named. And notwithstanding all this, there is no place of an equal population that contains so great a number of persons over seventy years of age, as is found in the ever changing temperature of Franconia.

Lieut. DeHaven, commander of the first Grinnell expedition in search of Sir John Franklin, experienced cold of the temperature of fifty-two degrees below zero, but it being a still, quiet cold, was not uncomfortable; but after he had been for months accustomed to temperatures a long way below zero, the temperature rose to 40 degrees above that line, and he remarks, "It was altogether a warm and melting day, and the heat oppressive."

There is abundant experience and observation in regard to the difference in the sensation of cold; persons wearing gloves of a tight fit, compared with the wearing of loose mittens. The tight glove in cold weather causes the hand to feel cold, but not so loose mittens. Then again, there is another great and very important matter as to bed clothing. A person who sleeps under light, feels less cold than one who reposes under a heavy covering. The blood of the person who sleeps under a light covering flows more freely than that of the person overloaded with blankets and coverlids, or whatever else they may be called. Persons who breathe cold air are more active than those who respire heated air, and there is a difference, too, in having the cold air mixed with sunshine, contrasted with those breathing heated shaded air.

I am in the constant habit of going hourly into the out door atmosphere at night to make observations. I wear a thin cotton night dress and slippers, and no other covering to my feet. It matters not to me what the state of the weather is, even if the temperature be a long way below zero; I never experience the sensation of cold, nor have I during extensive travels in cold latitudes, in which mercury became solid, ever been frosted. I sleep in a cold room, where neither fire nor the heat of it is admitted. One of the means of keeping warm in cold weather is to wear loose clothing from head to feet, and to abstain wholly from the use of alcoholic spirits, and to avoid breathing air which has been breathed over and over again by crowded assemblies.

I have made some experiments by fanning the oulbs and tubes of thermometers with both paper and feather fans, but in these experiments thus far, I have never succeeded in depressing the mercury. Now a person using a fan freely in warm weather, experiences a cooling sensation; yet so far as my observation has as yet been extended, the thermometer takes no notice of this artificial mode of putting the air in motion to cool it.

There are peculiar states of atmosphere in which fire on the hearth and in grates burns more freely than at other times. It is so with great conflagrations; and in this is found the extraordinary fact of the clustering of great fires.

I write most rapidly in a cold atmosphere and with greater facility, and would prefer breathing an atmosphere of a temperature below zero, if it was convenient to my employments to enjoy such a luxury.

When open fire-places were in use and hickory wood used for fuel, there was less complaint of cold in rooms than now. Then the open fire-place, fire and chimney kept the apartment all the time thoroughly ventilated; but now, since anthracite coal, tight stoves, close grates, steam pipes and hot air furnaces have come extensively into use, very many persons complain in winter of cold, or of the close heat, headaches, pains in the mind. Apoplexy and unnumbered ills are the experience of the affluent, and those not required to use abundant exercise.

I have had the opportunity of seeing the effect of the new mode of heating rooms in the Legislative Chambers at Albany. When open fire-places were in use there, with hickory fires, the members were remarkably healthy; since hot air furnaces have been in use, the very reverse has been the result, and to an alarming degree.

Rooms heated with anthracite coal should be furnished with fresh water holding alkaline salts in solution, and it should be changed twice every day. To those who desire it, aromatics may be added, which will impart to the breathed air a fragrance and a perfume both pleasant and useful. Beside this, the room should be ventilated every half hour.

In burning coal in my office, I evaporate, from a solution of the carbonate of soda, two quarts of fresh pure water in twenty-four hours. This gives me a good atmosphere.

For the New England Farmer.

A CHOKED COW—BITTER MILK.

Mr. Brown—*Dear Sir*:—I have got a cow that gives bitter milk, so bitter that we cannot use it. I have taken your paper for the past two years, and have not seen a similar case mentioned in it, and as I am at a loss what to do to remedy the evil, I thought I would just relate the particulars to you as far as I know them, and perhaps you or some of your correspondents can enlighten me. About six weeks ago, this cow got choked with a piece of carrot, (which through carelessness, were not cut small enough) and not knowing just what to do in such a case, she got rather roughly handled, some of my neighbors run their arm down her throat, with the expectation of pulling it out, which made her strain herself so, that I fear she injured herself, thereby causing her to give bitter milk. Be that as it may, she has given bitter milk ever since; I have two other cows that are fed just like her, that give good milk. In regard to getting her relieved of the piece of carrot, I would say, that after she had suffered about an hour, another neighbor came in and did the right thing; he took an old ox gourd, and wadded the small end of it with some cotton covered with a piece of thin leather, (about the size of a large plum) and made it fast with twine; he then pushed it gently down her throat, until he pushed the carrot into her paunch, which relieved her immediately, and she has been well ever since, to all appearances.

I state the above thinking it may benefit others who may be similarly situated. After her milk has stood a few hours I can perceive a greasy scum on the surface, in small patches, which is quite bitter to the taste. If you or any of your numerous subscribers can inform me what course to take, I shall feel greatly obliged. Wm. Proudman.

Amesbury Mills, Dec., 1856.

Remarks.—In the *Monthly Farmer* for 1853, page 145, you may find a remedy for choked cattle described and illustrated. In the manner then suggested, you could have *unchoked* your cow in a few minutes single handed. We hope some person will be able to enlighten you about the bitter milk. We cannot.

NEW SEEDLING STRAWBERRY.

Hanging at our left hand, is a portrait of a new seedling strawberry, originated by Charles A. Peabody, Esq., of Columbus, Ga., which is one of the most attractive objects in our new room. Mr. Peabody is the gentleman whom we spoke of some two years since as inviting one or two hundred of his friends to eat strawberries and cream with him. More than *one hundred* had assembled, some began to doubt his ability to fill so many mouths,—but on entering the feasting room were agreeably surprised to find that the company present were altogether too feeble to *work up the job clean* that was before them! And on entering his strawberry grounds they came to the conclusion that the locusts of Egypt might well be discouraged, if required to consume what was then before them. The *Soil of the South* says:—

"It is hermaphrodite in its character, producing fruit without an impregnator, being itself a capital impregnator for pistillate varieties. It is a hardy, vigorous grower, withstanding both cold and heat without injury. In good soil the vine grows to an enormous size, we have single plants that cannot be covered by a half bushel measure. The fruit is borne upon tall stalks, suspended on stems from three to five inches long, attached to the calyx by a coral-like neck, without seeds—there being very few seeds in the berry. It is of singular and beautiful form, somewhat irregular, and sometimes compressed, of the largest size, frequently measuring seven inches in circumference; flesh firm, melting, and of the most exquisite pine flavor, requiring no sugar for the dessert, rivaling the far-famed Burr's New Pine. It is a prolific bearer, opening its blos-

soms during the mild days of winter, and perfecting its fruit as soon in the spring as the weather will permit. When fully ripe, the color is of a rich, dark crimson. But its rich color, beautiful form, magnificant size, and exquisite flavor, are not all its recommendations; through its firmness and lack of acidity, it bears transportation better than any strawberry ever introduced."

EXTRACTS AND REPLIES.

IS IT GARGET?

MR. EDITOR:—I have a valuable cow, gentle, and heretofore easy to milk. Within three weeks there has seemed to be a growing up of one teat so that it is almost impossible to draw the milk; there is no swelling or pain, excepting when pressed very hard. I have tried various remedies. Can you tell me, through your columns, of any remedy?

G——n, Dec. 11, 1856. H. M. N.

REMARKS.—From your description we should judge the difficulty to be occasioned by one form of *garget*. In the October number of the *Monthly Farmer* for 1856, there is an article on this subject, to which you are referred. We should recommend washing the bag twice a day in cold water, milking carefully twice or three times a day, and give four drops of the tincture of Aconite, on a piece of bread, or a little meal. Give the Aconite morning and evening for three days.

LARGE APPLES.

I have been a reader of your paper for two years. Every article upon fruit and fruit culture I have carefully perused, and I take a great interest to procure the best and largest apples that can be found. Last week, being in the Philadelphia market, I noticed a basket of the nicest and largest apples that I ever saw or heard of. I weighed three, and they averaged 4 pounds and 2 ounces each. I bought the lot that he had, paid him five dollars per barrel. The next day I sold them to a New York speculator for ten dollars a barrel. I cleared fifty dollars on the trade. The man that raised the apples resides twenty miles from this place, where I have been to procure some scions, which I am to set in my orchard, in the State of Maine, where I reside. They are called *Trunk Apple*. The farmer that raised them said he had the only trees in the State. The way they received their name was this; he had a son who fell overboard at sea and drowned, and his chest was sent home; in that chest was an apple, partially eaten. For the purpose of a living monument of that son, he took the seed from the core and planted. Such is the history given me of the apple. I see no reason why they cannot be raised in my own State. My opinion is that one tree bearing freely is worth ten of the common fruit which I have.

Harrisburg, Dec. 8, 1856. S. D. THOMPSON.

FERTILIZING LAND.

On looking over the remarks of Mr. Choate, in his Report on the farms of Essex, several pages are devoted to fertilizing land. Much of the interest of the subject is impaired, by the extreme caution of the writer, in withholding the names of those who made the experiments. It is not enough to know that Mr. A. or Mr. B. did so and so—but we want to associate what was done with the *person* who did it, and the place where it was done. If we know the operator to possess a clear head and unwavering veracity, we give full credit to what he does, and his accounts, but if we do not know this—the very fact of *the name* being withheld, casts a suspicion over it. No doubt Mr. C. meant to state things truly, as they came to his knowledge, but many shrewd and wise men have been misled in their judgment by artful pretenders. No man need to be afraid to have told truly, what he has done. The operations on the farm should not be "hid under a bushel."

DUST ON OLD CHEESE.

Almost all who make cheese are troubled during the summer with a fine dust, which collects on the outside of old cheese only; this is called cheese mites, and is supposed to be alive. It is a remedy for this that I would like to know; and if you will please to answer, you will greatly oblige

Concord, 1856. AN OLD SUBSCRIBER.

THE WAY TO CLEAN PICTURES.

A subscriber in your last paper wishes information in regard to cleansing oil paintings, &c. Having a choice collection of paintings myself, I was in the dark as much as your subscriber, until I saw an article advertised by Mr. A. S. Jordan, No. 191 Washington Street, which is superior to anything I have ever seen, being cheeper, having a quicker effect, is easily applied, and is not injurious in the least. I can with confidence recommend it, as I have now used it for the past six years, and have saved a great many dollars in using it, instead of resorting to professed picture cleaners.

Yours respectfully, F. AUSTIN.

Boston, Dec., 1856.

WILL POTATOES MIX IN THE TUBER?

MR. EDITOR:—A correspondent sometime since had an article in the *Farmer* going to prove that potatoes would not mix by the flower of the tuber, but in seed flower only. I doubted whether his theory would square with the fact at digging time, or not, as it was contrary to all my experience in such matters. It so happened that I had two varieties, planted side by side, the Davis Seedling, and the celebrated Gilly Flower, both hardy varieties, and both in flower at the same time.

I send you a specimen of the potatoes, that you and others may see for themselves that they will mix in the flower of the tuber, and persons who wish to preserve their varieties pure must govern themselves accordingly. H.

Concord, Mass.

A FINE FIELD OF BARLEY.

I sowed last spring two bushels of barley. The wet kept it back for the first part of the season, but the last part it came on and grew finely. I harvested from it 25 bushels, weighing 48 lbs. to the bushel; it being the greatest yield that I have heard of in this vicinity. E. H. HAGGETT.

New Castle, Me., 1856.

HOW MANAGE MY NURSERY?

Will you or some of your correspondents inform me how to manage with a nursery, and what kind of fertilizer should be used when the seed is sown to get the greatest growth? How far should the plants be left apart the first year? C. H. H.

Nov., 1856.

REMARKS.—Prepare and manure the ground for a nursery as you would if you intended to get 80 bushels of corn to the acre. Twelve inches apart will answer for the young plants—though if you prefer fine, thrifty trees, a greater distance will be favorable. Keep the ground light and free from weeds, and mulch the trees if on rather dry soil, as they should be.

DEATH OF HON. SETH SPRAGUE.

It is with sorrow that we record the death of the Hon. Seth Sprague, which event occurred at his residence in this city, on Friday, Dec. 12th. Mr. Sprague had for several months been suffering from a disease which baffled the skill of his physicians, and which a *post mortem* examination, as we hear, has proved to be an internal cancer. Mr. Sprague was widely known throughout the State, from the interest which he took in agricultural matters. He filled the office of President of the Plymouth County Agricultural Society for several years, and was thoroughly versed in both the theory and practice of farming. For many years he was engaged in commercial pursuits in Boston, as partner in the well-known house of P. & S. Sprague, one of the oldest mercantile firms in the city. He was quite noted in both agricultural and commercial circles for his sound and discriminating judgment. For the last third of a century he has been much identified with political matters in Plymouth County. He has frequently served in the State Senate, and other public stations. He was also an active supporter of the temperance reform, and was a consistent and devoted member of the Methodist church. It falls to the lot of few men to enjoy in this life a greater measure of respect and confidence than Mr. Sprague secured from those around him; and now that he has gone, he leaves behind the precious memory of an eminently pure, useful and honored life.

Mr. Sprague was born in Duxbury, in 1787, and was consequently 69 years of age. His father (of the same name) was for a long time one of the most prominent men in the "Old Colony." Judge Peleg Sprague, of the United States Court, is a brother of the deceased.

AGRICULTURAL FAIRS.—The *Ohio Farmer* has a long and able article upon the subject of the perversion of the purposes of our agricultural fairs, and inquires "whither are we tending?" This question is often anxiously asked by thousands who love our instructive and pleasant rural festivals. The *Farmer* treats the subject fairly, yet "without gloves." The agricultural press, with scarcely an exception, is opposed to "trotting courses" on our fair grounds.

For the New England Farmer.

MOLASSES FROM THE CHINESE SUGAR-CANE.

MR. EDITOR:—About the middle of last June I received by exchange several small packages of seed from the Patent Office; among which was one of the Chinese Sugar-Cane. On the 18th of the same month I planted a few seed for experiment, from which one hill of seven plants was reserved. These thrived well, and at the time of the first heavy frost had attained a growth of about ten feet, with the seed at the tops apparently full sized, but, as was anticipated from the shortness of the growing season, not well filled and scarcely colored. From six of the stalks the juice was expressed and boiled down to the consistency of common molasses, yielding about a common coffee cup full (or one and two-thirds gills) of a rich syrup, which our grocers considered to be richer flavored than ordinary molasses, equal in quality to the syrup of commerce.

The saccharine substance was extracted from the cane by the following simple process: the cane was divided at the natural joints, and from the pieces thus obtained the hard bamboo-like casing was slipped, leaving the pith. The pith broken into pieces of convenient size was reduced to powder in a hand mortar, and in this state was thoroughly macerated in several waters, until little or no sweetness could be detected in it. The sweet infusion was strained through a linen cloth and then boiled to the proper consistency.

The process, I hardly need to state, was a laborious one, yet to a good degree thorough; and while I would not recommend it to the man who may cultivate his acres, and has at command all the resources in apparatus that art and science have afforded him, yet to some of the many who are deeply interested in the attempt to introduce the cultivation of the cane into our Northern agriculture, and are anxious to experiment in the matter, but whose most extensive and comp'icated crushing apparatus consists of a mortar and pestle and a strong right arm, a statement of the above simple process, may stimulate to a like experiment, and to such "emendations and corrections" as a little experience and good sense will be sent to afford us.

Please accept, with my best wishes, Mr. Editor, the accompanying sample of the molasses.

J. J. H. GREGORY.

Marblehead, Mass., Dec. 9, 1856.

REMARKS.—Friend Gregory will please accept thanks for his fine specimen of Chinese Sugar-Cane Molasses—an article, we trust, yet to be generally introduced as one of our staple New England crops. We have received specimens of the syrup from different sections of Massachusetts; and it was made by Mr. Boylston, editor of the *Cabinet*, at Amherst, N. H., so that the climate is undoubtedly favorable. It is a syrup, rather than molasses, the latter being an article *drained* from sugar. Let it have a more extensive trial another season.

A PLEASANT COUNTRY HOUSE.

As some of our readers are considering the subject of building, we give another illustration which can scarcely fail to suggest valuable ideas. It is extracted from WHEELER'S *Homes for the People*, a highly instructive work.

"A convenient and inexpensive home will be found in the following illustration of an Italian cottage, which is so arranged as to be suitable to almost any variety of situation or material.

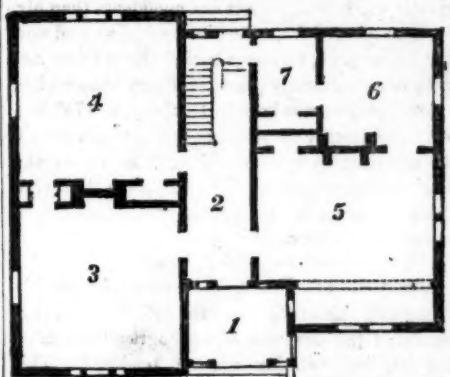
The plan has in front a large porch, No. 1, partly recessed within the building, and the remainder extending beyond the wall. This porch is ten feet wide and six feet deep, and is intended, to a certain extent, to supply the want of a veranda, and afford a pleasant place for enjoying the air and view outdoors. Within this is the hall, No. 2, six feet wide, and running to the rear of the building, with a door at its end, into the garden. In this is the staircase, and under its flight above are steps to the cellar, which would be under the whole building.

Upon one side of the hall is the parlor, No. 3, the size of which is fourteen feet square, and in the rear of this, connected by an entry between the two rooms, with drawers upon each side, is a bed-room, No. 4, of the same size, and in it a closet upon the other side of the chimney-breast, corresponding with the entry. Should the family not need this room as a sleeping-chamber, it could be used a family sitting-room, or a study, the latter purpose being suitable, should the plan be adopted by a professional or literary man.

The other portion of the house contains a large family living-room, No. 5, which, with the exception of the corner, taken out by the recess shown upon the plan, is six feet square. In this is a fireplace and closet, and adjoining it are a summer-kitchen, or sink-room, No. 6, and a pantry, No. 7. In the latter is a closet, and a door opens from the room into the rear-hall, and thence to the yard.

The height of this story is nine feet six inches in the clear. The floor above is divided in a similar manner to the one that has been described, excepting that the partition above that between the hall and family living-room, No. 5, is moved further in the room, and is upon the same line as the wall of the recess. By this means a pleasant sleeping-room for a child is added to the plan, and the chamber by its side still remains a large apartment. The space above 7, is appropriated to closets for stores and for linen, and an open area for boxes; over 6 is a servant's room, and the remainder of the house has three large sleeping-rooms, above 3, 4, and 5. The height of this story is eight feet in the clear, with straight ceilings, or with the plastering following a short distance up the slope of the rafters, or not, as wished. The rise of the roof affords an open space for boxes, &c., and should have access by a scuttle and step-ladder from the staircase hall.

The building may be constructed of frame or brick, as the neighborhood places most economically at disposal, and the finish within should be inexpensive. No cornices upon the lower floor, and the walls prepared for papering.



PLAN OF THE FIRST FLOOR.

The external dimensions of the building may be judged from the plan; and in examining the illustration of the exterior, let the reader remark, that the plan shows the building to a larger scale, in proportion, than preceding designes.

The finish of the exterior is in the simple and somewhat elegant character of Italian design. The porch is of wood, and the details of its construction are contrived to show congruity with that material —all unnecessary casing out and false pretence being avoided.

The roof is represented as covered with boarding, over which roofing-paper, cloth, or tin, is laid with raised rolls, at regular intervals nailed upon the boarding, and covered with the material employed. The chimney-shafts and caps are of bricks, pannelled at the side and ornamented by dentils of the same material. The cost of this little cottage will be from thirteen to fourteen hundred dollars. The plan is varied somewhat from one shown in page 161 of *Rural Homes*, which was erected in Connecticut, five years ago, for eleven hundred dollars.

For the New England Farmer.

MURIATE OF LIME.

Mr. Editor:—I have read attentively an article concerning my Muriate of Lime, published in your paper of 20th inst., and signed by D. W. Lothrop, and while I cannot object to his fairly stating his experience in the use of this manure, I must require of him more full explanation of the facts alleged, for they are so inconsistent with the results of so many others who are good experienced and practical farmers as to require me to consider his case "a rare *exception* rather than the rule." Perhaps his soil may not have required this manure, and may be already supplied with the materials it would introduce, or perhaps he employed it in an improper manner or in too limited quantities, and did not sufficiently mix it with the soil. Every one knows how similar failures attended the first introduction of that now universally approved and powerful manure, the Peruvian Guano, but now the causes of those failures are known, and guano in skilful hands is usually successful.

So far as regards the evidence cited by Mr. Lothrop, it appears by his own showing, that the witnesses are *two to one* in favor of "Gould's Muriate," namely: L. V. Page, of Bedford, and I. W. Brooks, of Somerville, in favor, and D. W. Lothrop against it; but I shall take occasion to bring forth a "cloud of witnesses" to sustain the evidence which I have already published, and hope to be able to scatter Mr. Lothrop's *"brick-dust and ashes"* to the wind, and to induce him to try the experiment with my muriate once more, and trust that he may yet get a good crop of marrowfats, and a plentiful harvest of corn, with a good clean and abundant yield of potatoes.

To insure these results, however, he must follow the same methods of operating that have proved so eminently successful in the hands of other practical farmers. These methods will soon be fully set forth in an able report on the subject, in which the great value of my fertilizer will be satisfactorily proved.

I cannot pass over Mr. Lothrop's article, without expressing my surprise at his not distinguishing the difference between quick-lime and semi-hydrate of lime, and the compound which makes up the composition of my fertilizer.

He justly condemns the application of quick-lime to barn-yard manure, since it would discharge the ammonia; but he overlooks the fact that my manure has no such effect; but on the contrary *it contains ammonia*, and will absorb even more from the barn-yard manure, with which it is mixed. I concur with his authority that ammonia and nitrogenous compounds are "the very treasures of the dung heap," but they are *not the only* treasures which it contains. The writer, certainly, does not intend to disregard the phosphates, the very bones of the grain crops, nor the lime salts, and the carbonaceous matters which by their decay furnish carbonic acid gas, the pabulum of the foliage, and a powerful decomposer of alkaline silicates in the soil.

If he will look again at the analysis of my muriate, some items of which he quotes, he will see how it differs from "quick-lime, or semi-hydrate of lime." He will find carbonate of lime, chloride of sodium, phosphate of lime, muriate of lime, muriate of magnesia, ammonia and organic matter. It contains but little organic matter, and therefore I recommend the admixture of it with barn-yard compost, which is too rich in organic and needs saline matters, which my manure furnishes. It is unnecessary for me "to send coals to Newcastle," and since the farm-yard always produces a sufficient supply of vegetable composted matter, it is desirable to omit adding matters which would increase the bulk of my fertilizer, and add to the expenses of its transportation, without any material benefit to the farmer, who has an abundance of such matters at hand. It was the omission of the use of such a mixture, that probably caused the failure of which Mr. Lothrop complains, for his soil may be poor in organic matters.

I do not suppose that any panacea has yet been discovered for the cure of the potato disease, which, as I am informed, is the effect of parasitic fungus, whose speres or seeds are transferred by the atmosphere, and attack the above ground stems of the plant first, and penetrate under the bark to the tubers beneath the soil; but I suppose that whatever invigorates the potato plant, enables it better to resist the encroachment of this insidious enemy, and I have abundant evidence of the fact, that much benefit has thus been produced by the employment of the muriate of lime.

I would request Mr. Lothrop to repeat his experiments with this manure, mixing it first with barn-yard compost, and in order to learn the relative effects of the unmixed and mixed composts, let him try the two separately, and note the results, which I am confident will prove most satisfactorily the great value of the muriate of lime.

Mr. Lothrop intimates that I purchase poor lime for the manufacture of the muriate. To show how much mistaken he is, I will state that my business is to manufacture Rockland lime, which is sold at $1,00 per bbl., oyster shell lime, at 50c per bbl. The muriate is manufactured of shell lime inasmuch as it contains by analysis 94 per cent. of carbonate of lime, while the Rockland lime contains only about 64 to 70 per cent. of carbonate, and instead of making "two barrels out of one" in the manufacture of the muriate, one barrel of unslaked shell lime will make four barrels of muriate, with the addition of the other materials of which it is composed.

As to its value as a manure, Professor Way, of the Royal Agricultural Society of England, has analized the best Peruvian guano, (in the patent office reports for 1855, page 138,) and says, that the value of guano consists in the ammonia and phosphates it contains, the first, ammonia 17 per cent., or 340 lbs. to the ton, and 6 pence sterling or 12½ cents per lb., and the value of which is $42,50. Phosphates 23-48 per cent. at a value of 3 farthings or 1½ cents per lb., is equal to 470 lbs. at 1½ cents, $7,05.

In the same ratio, according to Dr. Jackson's analysis, the muriate contains:

128 lbs.	of ammonia at 12½c	$16,00
130 "	phosphate at 1½c	1,95
288 "	salt at ½c	,96
	Total	$18,91

Making the value of it $18,91 per ton, according to the estimated value of the best Peruvian guano at $54 per ton, a much lower price than it has been sold for in this market, and without saying anything of the value of the other ingredients of which it is composed. In a word, this article is worth one-half as much as the best Peruvian guano, and is a renovator of the soil, and will last several years. The crop of grass raised on the land of David Wood, Esq., of Lexington, the last season, and cut about the 15th of June, was estimated at about 3 tons to the acre, it being the third year since it was top dressed with the muriate. The estimate was made by one of the most distinguished agriculturists of the State. Yours truly,

Boston, Dec. 23, 1856. JAMES GOULD.

For the New England Farmer.

A TOUCH OF WINTER.

Yesterday the mercury ranged through the day from 10° below, to zero, averaging *below zero*. It rarely happens that we have a day so cold, so early in the season—especially with no covering of snow—but it is now softened, and we are having an abundance of rain.

The season has been favorable for the prevalence of *scarlatina*. A beautiful little girl, aged 10 years, has just expired in the house next to me—after an illness of only 36 hours. I consider this the most dreadful disease to which children are exposed in our climate. It destroys so suddenly, that no medical application can be made. I have seen *Belladonna* recommended as a preventive, but in what quantity or in what manner to be applied, nothing was said, so that the knowledge of the remedy amounts to very little. A few days since, I heard a gentleman of Newburyport say that he had lost 8 children with this disorder, within what limits of time he did not mention—or how many children, if any, remained. It rages with destructive effect in many places, the present season.

South Danvers, Dec. 19, 1856.

REMARKS.—Belladonna should be given in the morning, three or four globules at a time, for two or three days in succession. A homœopathic physician informed us that he had not lost a case in scarlet fever for many years, though having prescribed for a large number.

For the New England Farmer.

PATENT OFFICE REPORT.

BY HENRY F. FRENCH.

OFFICE HOLDERS—AUTHOR OF THE AMERICAN MUCK BOOK—DOMESTIC ANIMALS—EFFECTS OF FOOD AND CLIMATE—NATIVE STOCK—RAISE YOUR OWN SUGAR.

Sidney Smith says that the world is made of *round* people, and *three-cornered* people, and constructed with various *holes*, some of which are round, and others triangular, for the people to live in. If a round man chances to get into a round hole, he is adapted to his position, and is comfortable and useful; but if he happens into a triangular one, he is, in more senses than one, out of his sphere, and of course, does not revolve pleasantly. Now whether D. J. Browne, who wrote the American Muck Book, and other valuable works, and who is the chief worker and chief clerk in the agricultural department of the Patent Office, is a smooth or an angular person, it is not necessary to decide, but it is evident, at least, that he fits his place, and his place fits him.

An office in Washington is a tight place for any man to be in, as a general rule, and the principal consolation for those who are suffered to stay in, is, that there is a "lower deep" from which they escape, so long as they are not turned out; a sort of annihilation to which a government clerkship seems to doom its incumbent.

Addison speaks of one who illustrates absolute power by a picture of a tall man who kicks a man who stands a little lower, who, in his turn, kicks the next below himself, and so on, the kicks all going in one direction. Such is office-holding in Washington, and indeed, everywhere else. Once in a great while, we find at the head of a department a gentleman who knows the proper use of his boots, and treats all those who rank below him with consideration and kindness.

Hon. Charles Mason, the present Commissioner of Patents, is everywhere known to be a man of this rare description. His report, just received for the year 1855, is doubtless more valuable than any that has preceded it. It is well arranged, thoroughly digested, and has what is essential to such a volume, a good index. The hand of Mr. Browne is manifest throughout the book. Several capital articles are from his pen, and the whole work bears the mark of a mind that is master of the subject of which it treats.

Many farmers place little value in Patent Office Reports. Whatever may be said of former volumes, this is a useful book to all who know enough of agriculture to appreciate it. It contains many articles which ought to be republished in all our agricultural papers, but as this cannot be done at once, let us refer to a few topics which are interesting to all who are engaged on the farm in New England. Referring to the pencil marks in the margin, which

.ndicate the portions which struck me as worthy of especial notice, at my first perusal, I find some striking facts recorded under the title—

DOMESTIC ANIMALS.

The following illustrations of the effect of food and climate upon animals, are given from a former report:

"If the London dray horse be conveyed to Arabia and subjected to the same influences as the native horses of that country are exposed to, in the course of a few generations, he will present the leading characteristics of the Arabian horse. The head will gradually diminish in size, the limbs will become fine and clean, the massive proportions of the whole body will disappear, and, not only will the external form of the native be acquired, but aside from this, something of the chivalrous disposition or spirit. Again, if the race thus improved be conveyed back to the central or northern parts of Europe, it will gradually deteriorate, and in the course of some generations, will assume all its original proportions."

Now that strikes one as rather strange doctrine; but we may as well "season our admiration for awhile," till we read what follows:

"If sheep are carried from either of the temperate zones to the burning plains of the tropics, after a few years material changes take place in their covering. The wool of the lambs, at first, grows similar to that in the temperate climates, but rather more slowly. When in a fit state for shearing, there is nothing remarkable about its quality, and when shorn, it grows out again, as with us, but if the proper time for shearing be allowed to pass by, the wool becomes somewhat thicker, falls off in patches, and leaves underneath, a short, close, shining hair, *exactly like that of the goat in the same climate*; and wherever this hair once appears, there is never any return of wool."

One can readily enough conceive that in process of time, a truck-horse may become an Arabian courser, but it is a severe trial of faith to be asked to give up the familiar old Scripture distinction between sheep and goats! A sheep covered with goat's hair would hardly know whether he belonged on the right hand or left. However, this may all be literally true, although the facts as to the horse would be difficult to verify, because it is said to take "a few generations to try the experiment." At all events, the extracts will furnish new arguments to those who think that "native stock" is just as good as the best improved, from abroad, and those men need some help. It is not uncommon to hear men insist that the "natives" are, after all, just as likely to make good cows as the Ayrshires. I once heard a distinguished agriculturist insist in a public address in Massachusetts, that it was useless to attempt to improve our neat stock by importations, because our soil and climate would soon modify the foreign stock and make it precisely like the native. I ventured to suggest at the time, that pure Jersey cattle would breed natives, about the time white men or negroes imported into America would become Indians! Mr. Browne's opinion is that though food and climate may work singular changes, especially in the external appearance of animals; yet that "it is not to be understood that these variations constitute the differences in the races or varieties of our domestic breeds, but that they have long existed with similar forms and habits, as at present, either acquired and accumulated through a series of generations, which, in the course of time, have become hereditary, or that they have ever retained their original and typical casts from their earliest progenitors."

On the whole, they who believe in native stock, had better begin with buffalos, so as to be sure their blood is pure, and when they have been improved carefully, as long as the North Devons and Jerseys, perhaps they will prove as valuable for the yoke and for milk. In the mean time, the rest of mankind will probably prefer to derive some advantage from the knowledge and care which for generations has been bestowed in reproducing and perpetuating the qualities which are deemed most valuable in our animals.

CHINESE SUGAR CANE.

This Report has some facts as to this new plant, but Mr. Hyde, of Newton Centre, Mass., Mr. Boylston, of Amherst, N. H., and others, have already given us facts enough to render it more than probable that wherever Indian corn will grow, the same land will produce syrup and sugar from the Chinese sugar cane. Whether the crops will prove more profitable than that of corn, is the question to be settled. To the Patent Office we are indebted, I believe, entirely for the introduction, certainly for the distribution, of the seed of this plant.

It comes first, when it is most needed. The sugar crop of Louisiana is failing, and although government has taken the extraordinary step of sending a ship abroad to procure a new supply of cane-cuttings for the southern sugar plantations, yet we shall continue to hope, for the present, that our buckwheat and syrup will grow side by side on our own farms, and that free trade and sugar may yet thrive together on free soil.

An old clergyman, taking final leave of his people, said to them, "My friends, I know I have done a great many foolish things, I may have done some wicked things, but you will all bear me witness that I have never done a *long* thing."

Fearing I may fall into that unpardonable sin alluded to, I will defer the subject till another number.

BLACK HAWK'S DISEASE.—The following is from a letter received from Dr. George S. Gale, too late for publication last week:—

"Black Hawk's disease is what might justly be called gout—many, perhaps, would call it rheumatism. He was taken on Thursday, November, 27th, with chills, succeeded by febrile symptoms; and on

Friday followed by soreness and lameness forward, increasing rapidly, with great restlessness, disposition to change position frequently, and great difficulty in moving the fore legs. Pulse 65 to 70 per minute; fore legs hot, and trembling almost constantly. He had no cough, but the breathing was sometimes frequent, apparently governed by the pain and exertion he made to move. The air appeared to enter every part of his lungs, with freedom, producing the usual respiratory manner up to within five hours of his death. I then perceived his breathing more labored, and thought pulmonary congestion was rapidly supervening—gave up all hope, and left him in care of his faithful groom. . . . . History must now do him justice. . . . . He has doubtless exceeded even your early and most sanguine expectations. . . . In the poetic language of Job, he was a horse whose 'neck was clothed with thunder,' and the 'glory' of whose 'nostrils was terrible.'"—*Boston Cultivator.*

ROYAL ROAD TO GOOD FRUIT.

The royal road to a supply of good fruit, laid down in the following paragraph from the *New England Farmer*, reminds us of the royal road to science which is sometimes pointed out by ambitious book-makers and quack school teachers. It is too easy to be of value. It is "French in six lessons," and "German in one quarter." We don't believe in it, or in anything of the kind. Nevertheless, the *New England Farmer* stands sponsor for it in a half-dozen exchange papers now before us, is an authority in such matters, and so—here goes! Any one who gets fruit trees to his liking in this way will please let us know.

"HOW TO GET FRUIT TREES TO YOUR LIKING.—In the fall, October or November, take a branch of an apple or pear tree, such as suits your taste, take off down to the third year's growth, cut it smooth and rub it on a red-hot iron, so as to scorch and shut the pores of the wood thoroughly; then bury in the ground all but the last year's growth. If placed in good ground, and well taken care of, you will have fruit in five or six years. I have sometimes dipped the lower end in melted rosin, but think burning preferable. I have a tree near my door that is nine feet high and well proportioned, that I took from a graft four years ago; to this, rosin was applied, and whatever sprouts sprung up, the next summer were bent down and became roots. We get fruit this way considerably quicker than from seeds, and we know what we have growing, and when grown the whole tree is of the same kind, and whatever sprouts come from the roots in after years can be transplanted without grafting. In case of drouth the first year, they should be watered."—*Rural New-Yorker.*

REMARKS.—Some correspondent of the *New England Farmer* may have expressed the views above stated by the *Rural*, but if so, it is the correspondent, and not the *Farmer*, that is "the authority." There are yet some things to be learned about trees, but there is no *royal road* to an orchard bending with luscious fruit. It must come by long care and patient assiduity.

LET US BE HAPPY.

BY ELIZA COOK.

O! let us be happy when friends gather round us,
However the world may have shadowed our lot;
When the rose-braided links of affection have bound us,
Let the gold chains of earth be despised and forgot;
And say that the friendship is only ideal,
That Truth and Devotion are blessings unknown.
For he who believes every heart is unreal,
Has something unsound at the core of his own.
O! let us be happy when moments of pleasure
Have brought to our presence the dearest and best,
For the pulse always beats to most heavenly measure,
When love and good-will sweep the wings of the breast.

O! let us be happy when moments of meeting
Bring those to our side who illumine our eyes;
And though Folly, perchance, shake a bell at the greeting.
He is the dullest of fools who forever is wise.
Let the laughter of Joy echo over our bosoms,
As the hum of the bee for the mid-summer flowers,
For this honey of happiness is from love's blossoms,
And is found in the hive of these exquisite hours.
Then let us be happy when moments of pleacure
Have brought to our presence the dearest and best,
For the pulse always beats to most heavenly measure,
When love and good-will sweep the strings of the breast.

Let us plead not a spirit too sad and too weary,
To yield the kind word, and the mirth-lighted smile;
The heart, like the tree, must be fearfully dreary,
Where the robin of hope will not warble awhile.
Let us say in our pride, that we care not for others,
And live in our wealth like an ox in his stall;
'Tis the commerce of love, with our sisters and brothers,
Helps to pay a great debt to the Father of All.
Then let us be happy when moments of pleasure
Have brought to our presence the dearest and best,
For the pulse ever beats with more heavenly measure,
When love and good-will sweep the strings of the breast.

PECULIAR HABITS AND MANNERS OF THE DUTCH.

In all parts of the continent of Europe, with the exception of Holland, there is so much in common in the modes of living, that in going from Paris to Naples, the traveller recognizes but little difference in all the ordinary modes of living. But the moment the precincts of Holland are entered, the difference is quite marked. The combinations of dykes and canals, straight rows of trees, gardens which overspread the landscape, laid out with mathematical precision, and the wings of the wind-mills, which are swinging in every breeze, gives to everything a different aspect from that which is met with any where else. Extreme cleanliness in all that appertains to the dwellings, the barns, and stables, is a very striking characteristic,—it gives a degree of freshness to everything, which is very pleasant to the stranger who has just arrived from Italy. Saturday morning is the time when a universal cleaning takes place. The doors and windows of the houses are thrown wide open on this day, and the bustle that is going on within is a caution to all intruders to keep their distance, or run the risk of being saluted with the mop or the brush, or the spouting water which issues from a small engine, which is almost universally used to clean the sidewalks, the walls and the windows. As soon as this is all over, the doors and windows are closed again, and the house is shut up for another week. The drawing-rooms of the dwellings are seldom entered except upon great occasions, such as a wedding, or

an annual party. In some parts of Holland, the visitor is expected to take off his shoes previous to entering a house, and in all cases he is expected to clean them thoroughly, (a requirement which should be regarded in all countries.) But notwithstanding all this carefulness about everything that pertains to their residences, the persons of some of the lower classes give evidence that their personal habits are not more tidy than is observed among the same classes in England, France or Germany. One of the things essential to the comfort of a Dutch lady is a foot-stove filled with hot embers of turf or charcoal, which she not only constantly uses at home, but has it carried about with her wherever she goes—whether to a concert, to church, or a social visit. Hundreds of these stoves are to be seen piled up in the aisles of churches.

When sickness occurs in a family, a paper is stuck up daily upon the front door, on which is written the state of the invalid's health, drawn up by the doctor, which gives information to friends coming to make inquiries, without disturbing the family. In some parts of Holland, families in which a birth occurs, enjoy peculiar privileges; for a certain number of days, nothing which is calculated to disturb the mother is allowed to approach the house; it is protected from legal executions, no bailiff being allowed to approach it; no soldiers can be billeted on the family, and when a company of troops pass by the house, the music ceases, and they pass with the silence of a funeral train.

The servants are extremely neat and tidy in their appearance, and are faithful and attentive to their employers; they enjoy many privileges peculiar to their class; the family arrangements are so conducted as to allow them to attend church on the Sabbath. When a servant girl is hired, she always stipulates for a certain number of holidays, to attend a sort of Dutch Carnival, which is called *Kermis*, (meaning *wake* or *fair*) which are of frequent occurrence; they swarm at these festivals with their sweet-hearts; and if a damsel is so unfortunate as not to have one, she *hires* one for the occasion,—which is not at all uncommon,—substantiating the saying that "everything has its price."

A person is frequently met in the street, of serious and staid deportment, dressed in a cocked hat and wig, a long crape hat-band, and a short cloak. The duty of this personage is, upon the occurrence of a death, to announce the event to the friends and connections of the deceased, so that upon his approach to a house, the family are at once aware that they have lost a friend.

The Dutch have a peculiar veneration for the stork, and never injure or disturb these birds. A frame-work, (which sometimes consists of an old cart-wheel) is not unusually placed upon the house-top, for their convenience, where they can make their nests; these huge nests are seen perched upon the roofs, not only of the houses of the farmers, but on the gables of the buildings in the cities. To kill one of these birds is regarded almost as a crime. The stork migrates to the south in August, and returns in May; they take with them their young broods which they have reared; indeed, the stork has remarkable affection for its young. It is a matter of history that, during the great fire which occurred in the sixteenth century, and which nearly destroyed the town of Delft, storks were seen carrying away their young, through the midst of the flames,—and when unable to save them, they perished with them in the flames. Stringent local laws are in force in all the provinces, to protect the nightingales and other singing birds, which are quite numerous, from harm, and molestation, and any infraction of the laws is severely punished.

The maketing is supplied to the families by women who carry to each house what they have for sale; they are frequently seen with a yoke on their shoulders, carrying a pannier or pail at each end of it, filled with butter, potatoes, fish, and in fact every description of food which is required. Their appearance is much superior to women of the same class in any other country, being dressed with care and neatness; in fact, it is a custom among the people to decline to purchase of them, if they do not make their appearance thus tidily attired.—*Correspondence Christian Witness.*

For the New England Farmer.

POP CORN.

Messrs. Editors:—I am apprehensive that the value of the common (now *quite* common) white pop corn, as an article of healthful and economic food, is not appreciated. Under the Jewish dispensation, *unleavened* bread was an article of prime necessity, and made such by an almost imperative command from heaven. It is not my purpose to show how far the Jewish law of dietetics may, or may not, have harmonized with the light which modern science has thrown upon our physiological organization; but I can readily perceive that the use of unleavened bread was instituted for wise purposes, quite as readily as I can appreciate the reasons, in a warm country like Judea, for the interdiction of swine's flesh. All leavened bread must of necessity contain some substances not congenial to the highest or healthiest development of the organs of nutrition. The process of vinous or saccharine fermentation, by disengaging a portion of the carbon and oxygen, destroys a portion of the nutritive matter in bread; and in some of the lighter bakers' loaves this process has evidently been permitted to go on until about as much nutrition is left as may be found in a common bass-wood chip. The common hoe-cake of Virginia, which is nearly identical with the johnny-cake of New England, is more nutritious than the yeast-risen loaves from the best wheaten flour, because no part of the nutritive principle is disengaged by the process of baking. Thus, popped corn, while it is lighter than the lightest wheaten loaf retains all the original nutrition of the grain, without being encumbered with any unhealthy ingredient. As an article of food, whether eaten dry, or in milk, it is palatable to almost every one. Children consider it a great treat, and yet how few families use it freely!

I consider the pop corn as easy a crop to raise as any other. In fact, though my own experiments have been on a small scale, I am satisfied that I can raise as large a measure of this, as of the common yellow corn, upon a given space. True, the ears of the pop corn are much smaller; but then it will bear being planted much nearer together, and the average number of ears upon a stalk is nearly double that of any other variety of corn I have ever cultivated. My fowls are exceedingly fond of it, and will pick it out from any other variety when mixed and fed to them. The oleaginous matter which abounds in it, and the swelling of which by

heat causes this corn to pop so freely, must, I think, render it peculiarly valuable in the fattening of fowls; and I hope all our farmers will at least try the experiment of a crop which seldom fails, and which, when it comes into more general use in families, will abate a small per centage, at least, of the tribute which all New England now pays to the Great West for bread-stuffs. A corn-popper costs but about a quarter of a dollar; and when pop corn is raised so freely as to be sold for a dollar or less per bushel, it will be one of the cheapest and healthiest articles of diet to be found in the whole catalogue of good things. I trust the time is not far distant when what is now held as a luxury, will become a blessing of no ordinary magnitude to the "hard-faring poor" of our land. E. C. P.

Somerville.

For the New England Farmer.

ESSEX AGRICULTURAL TRANSACTIONS.

By the persevering industry of the Secretary of this society we are favored, in due season, with another number of its transactions—a volume, it should be called, for it contains 200 pages, neatly printed in readable form, with all desirable illustrations of tables and index, and with here and there a pleasant song and story, as spices for entertainments.

First came the address of B. P. Poore, of *Indian Hill Farm*, a document of 28 pages, every one of which I read with increasing delight, although I had before heard it with careful attention. I know not how expert the author may be in turning the furrow slice and seeding the field, but he has certainly shown himself to be an adept in antiquarian research, especially of Indian relics, and many an inquirer will be obliged to him for bringing together so much interesting matter. His reference to those fathers of Essex, Pickering, and others, who did so much to advance the interests of this society, and of the community in which they live, is certainly great. "Old fogies" as they may have been, one of them was worth a dozen sprouts of modern growth.

In addition to the reports of the year, some of which are prepared with much labor, and marked ability, the volume contains several papers of sterling value. Although I have spoken favorably of those reports which have been prepared with care, there are others of which I feel constrained to speak in a different strain. Of what use is it, year after year, to accumulate a catalogue of premiums awarded without giving any reason for the awards made? Whenever a committee makes an award, they should tell in plain English their reasons for so doing. If one bull is superior to another, they should say in what points he is superior; and if one cow or heifer is preferred to another, they should tell why they are preferred. If they are not capable of doing this, they are not fit for the trust reposed in them. But the same skill and discrimination that will enable them to select the best animal when they want to purchase, will qualify them to judge of them when presented at the shows. Within the last thirty years, the State has given to each of its agricultural societies nearly $20,000, and it has the right to demand of them intelligent returns of what they have done, and it is the duty of the State Board of Agriculture to see that they are forwarded. I believe Essex has done her duty as well as any other county, though there is much left undone that ought to have been done. ESSEX.

THE VALUE OF SCIENTIFIC MEN.

The Philadelphia *Ledger* of the 29th ult. contains an exceedingly able article on the above subject. The following extracts from it will give our readers much pleasure:—

"To many, the scientific men of a nation seem but drones, without practical utility, trying all sorts of impracticable experiments in their laboratories, mixing acids and alkalies, and talking learnedly on subjects far removed from practical life, but *doing* nothing for mankind. Solomon tells us too of a poor wise man who delivered a city, yet no man remembered him.

If there is one sign of these times more hopeful than another, it is that scientific men are, as a class, more honored than at any former period of the world's history. James Watt, who discovered the steam engine, has enabled England, with a population of twenty-five millions, to do work that as many hundred millions of men could not have done without. It is thus that science has created the fabulous wealth of that monarchy. She is doing the same at this moment for our own country. Who can tell the value to this nation of the life of such a man? Fulton, with his steamboats, or even above him, our own glorious old Franklin, who wrested the lightning from heaven, and the sword from the hands of tyrants? Doubtless many a man, who boasted of his own great practical business powers, smiled, if in passing he marked him, with kite and key demonstrating, in this, our own city, the identity of lightning and electricity, and laying the foundation thus for those electrical telegraphs now ready to convey tidings from continent to continent round the globe in an instant. Who can calculate the value of such a man as Prof. Morse to the country and to the world?

The scientific man, then, is of value to the community just in proportion to the amount of labor he saves to other men while producing similar results. Leibig has increased the production of all the farms in England, by applying the principles of analytic chemistry to soils, manures, and agricultural results generally—he has been worth millions of bushels of wheat already to Europe. The scientific medical men of that country have lengthened the average of life several years. The same is true of mental science. He who has a better knowledge of those laws which enable a man at once to distinguish truth from error, can write a book which will save thousands from some popular mistake, or from years of laborious thought, enabling men to form just conclusions without delay. His empire is over the mind of man.

Nor is science less valuable even in matters of religion. Moral science is but a branch of this. M. Guizot, in Paris, is at this moment urging the establishment of scientific theology in that city. Natural religion is, of all sciences, the most delightful, the most practical, and the most useful. It corrects a thousand political blunders, and is, in effect, the basis of all true legislation."—*Scientific American.*

A BAD HABIT.—It has been said, that "to *break* a horse of the habit of *breaking* his halter, you

must *break* his neck;" and some person, desirous of saving time by performing the three feats at once, has recommended that the horse be tied on the bank of a stream, in such a position that when he breaks his halter he may turn a somerset into the water. But, on the contrary, a horse can be broken of the trick, and that without endangering his life or limbs. The remedy is simply to tie the horse, with a good stout halter, to the end of a stout limb of a tree near the ground. A horse does not break his halter by a steady pull, but by jerking at it; and as the limb will spring whenever he jerks, it will prevent his snapping it. Tie the horse in various places, (to limbs,) because if he is kept tied in one place he soon gives up pulling at the halter there, but when tied to a post he soon resumes his old tricks.—*Philadelphia Newspaper.*

PLASTER FOR PASTURES.

There is no agricultural paper filled with better and more strictly reliable articles than the "*Plough, Loom and Anvil;*" and as an evidence of the truth of the remark, please read the following on the use of plaster for pastures.

That plaster is not a fertilizer, that it does not enrich the soil directly and by virtue of its own ingredients, is true. Hence it must not be relied upon alone, but should be used in conjunction with other manures, either as existing in the soil in some form of organic matter, or as applied by the farmer in connection with the plaster, or in the form of green crops turned under, or as furnished, in the case of pasture lands, by the droppings of cattle.

It is true also, we believe, that "plaster increases the green portions of plants—stalks, leaves, etc.—more than it does the grain." This is an argument for its use on pastures. Here the increase of the plant, not of the seed, is the thing sought. The plaster, acting on the organic matter in the soil, produces three effects: 1st, the direct increase of feed; 2d, the consequent increase of manure left by the cattle; and 3d, an increased retentiveness of the soil for manure; so that, although plaster is not in itself, strictly speaking, a manure—does not, like barn manure, afford all the elements of food required by plants, nor more than a small part of them, as sulphuric acid and lime—yet its action is to render the soil *permanently* more productive, on all those lands where it is found to operate well; and those, we believe, are more extensive than is generally supposed, embracing a very large portion of all uplands.

It may be said, that if plaster causes a luxuriant growth of plants, and yet does not furnish the food out of which they grow but in small part, as we have admitted, it must necessarly exhaust the soil. That does not follow of course; because, in the case of pastures, what is taken from the soil is immediately returned to it; and besides, it should be remembered, that more than ninety per cent. of the grass growing in a pasture, comes not from the soil, but from the air. If, then, the sprinkling the surface of a pasture with plaster enables it to retain more of the manure dropped by animals, and to draw more nutritious gases from the air, it is so much saved on the one hand, and so much gained on the other.

We would earnestly commend more experiments with plaster on pasture lands. Do not be deterred by the statements that plaster was tried on lands thirty years ago and did no good. All that may be true, and yet be no guide for the present owner of those lands. The lands were then comparatively new. They may have produced well without plaster, possibly as well without as with, in the state in which they then were, and yet in their present state plaster may be of great service.

As to the quantity. For present effect, 100 lbs. to the acre is as good as 400. If, after thorough trial, it is found to be of little or no use, then the extra application will be saved; but if its effect is demonstrated to be good, then, after that, apply 100 lbs. to the acre yearly, or 400 lbs. once in four years, as you find to be most economical.

THE EDUCATION OF THE EYE.

We may not be called upon to hunt white foxes in the snow; or, like William Tell, to save our own life and our child's by splitting with an arrow an apple on its head, or to identify a stolen sheep by looking in its face and swearing to its portrait; but we must do many things essential to our welfare, which we would do a great deal better if we had an eye as trained as we readily might have.—For example, it is not every man that can hit a nail upon the head, or drive it straight in with a hammer. Very few persons can draw a straight line, or cut a piece of cloth or paper even; still fewer can use a pencil as draughsmen; and fewer still can paint with colors. Yet assuredly, there is not a a calling in which an educated eye, nice in distinguishing form, color, size, distance, and the like, will not be of inestimable service. For, although it is not to be denied that some eyes can be educated to a much greater extent than others, that can be no excuse for any one neglecting to educate his eye. The worse it is, the more it needs education; the better it is the more it will repay it.—*The Five Gateways of Knowledge, by Professor G. Wilson.*

Drainage of the Human System.—Erasmus Wilson, a distinguished physiologist, counted the perspiratory pores on the palm of the hand, and in a square inch found 3,528, with each of which a little tube a quarter of an inch long was connected, making the length of tube in a square inch 822 inches, or 73 and a half feet. On the pulp of the fingers the number of pores was a little greater; on the heel the number was 2,268, and the length of the tube 47 feet. Taking 2,800 as an average of the number of pores in the square inch over the whole surface of the body, and 700 consequently the length of the tube in inches, the number of square inches of surface in a man of ordinary size being 2,500, there would be 7,000,000 pores, and 1,750,000 inches of perspiratory tube, that is 145,-833 feet, or nearly 28 miles. How important the necessity of attention to the skin, lest this drainage be obstructed.

☞ Several gentlemen have recently acquainted the Patent office with the fact of the success of the liquorice plant, which is hardy as far north as Connecticut. It is employed not only for medical purposes, but, they say, is an important element in preparing some of the best ale and porter in Great Britain.

For the New England Farmer.

CULTURE OF CARROTS.

Several queries have lately arisen in relation to this valuable vegetable, by reason of suggestions from those experienced in their culture.

First, what *depth* should the land be plowed for the advantageous culture of the carrot? Second, can the carrot be advantageously grown several years successively on the same land? As to the first inquiry, we had supposed that deep stirring of the land, say from 9 to 12 inches at least, would be beneficial to the crop of carrots. It had not occurred to think otherwise, until we heard *a practical man* who has grown as fine crops as we have ever seen, (more than 1200 bushels, of 50 pounds each, to the acre,) say, that he used only a single horse in plowing his land for carrots;—and rarely plowed more than 5 or 6 inches deep. We asked him why he plowed this depth? and he said he would not thank any one to plow any deeper than this. In fact, he knew this depth would yield a better crop than if the land was plowed deeper. He then related his experience in this manner.

One season he had engaged his neighbor to come with his oxen to aid in plowing his carrot field.—By reason of some delay, only about two-thirds of the field was turned, before night came on; and he turned the remainder the next morning, with the horse alone, without the oxen. The entire field was manured alike and treated alike, in all other respects; and the part plowed with the horse alone produced larger carrots, and a heavier crop than the other part of the field. Ever since he has used only his horse in preparing land for carrots, and he usually plants from *a half to two acres.* He is not a man who boasts of what he does, or who is fond of having his name appear in papers. He is a man who understands very well what he is about—and what he says can be relied on. I am aware that the appearance of *one swallow* is not a sure indication that summer has come, but it is enough to awaken inquiry, and unless some facts appear to the contrary, is enough to warrant the belief that summer is near.

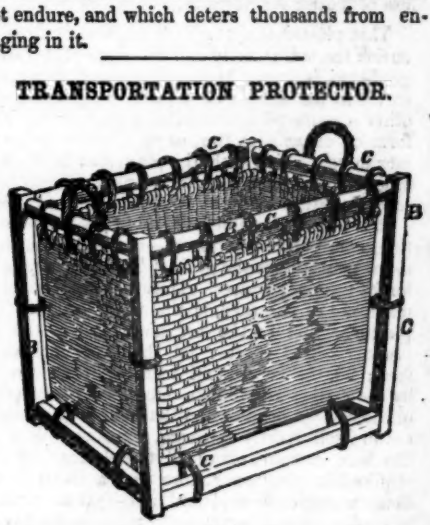
As to the second inquiry, I know no definite facts bearing upon it, but have heard opinions very different, from those equally well experienced. Whether there is actually any thing peculiar in relation to crops of carrots following each other can only be answered by those who have been observant of facts. If my recollection is right, the cultivators of Worcester county have maintained that they grow abundantly five years or more successively on the same land. In Essex, the opinion prevails, that it is not well to attempt to grow them more than two years in succession. If you or your correspondents can throw light on these inquiries, they will do a good service to the farmers of the community.

December 3d, 1856.

REMARKS.—It is minute, special inquiries in regard to crops that lead to beneficial results. Our correspondent is one of the most untiring and critical observers, and has done good service to the cause by this habit. Theory and practice have generally been united. It is certainly unusual to hear one advocate shallow plowing for this crop; the theory, however, may be a correct one,—we cannot, positively, gainsay it. The common practice is against it. The kind of land, the location, even though the land were all in one piece, and the state of humidity and heat and cold, must be pretty well known in order to judge understandingly of this experiment. This our correspondent well understood in his suggestion that one swallow is not a sure indication of summer. This notice of the subject will lead to more experiments.

We have cultivated carrots on the same piece of land *four* years in succession, with a gradual increase of crop. Is not this the correct course? Manure highly, with manure as free as possible from all seeds, cultivate thoroughly, so as to utterly exclude all weeds, and then occupy the same land for the carrot crop from year to year. The main cost of the carrot is not incurred in plowing, manuring or seeding, but *in weeding*; this is a slow, tedious, and expensive process,—one which the farmer who is accustomed to active habits cannot endure, and which deters thousands from engaging in it.

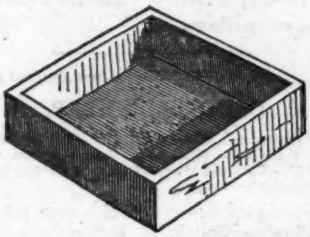
TRANSPORTATION PROTECTOR.



The inventor of this useful contrivance for transporting tender articles that are liable to injury in transporting, Mr. HENRY B. OSGOOD, sends us the following description, which, with the engravings themselves, will clearly describe their construction and the uses to which they may be appropriated.

DEAR SIR:—My spring frame for packages, or Transportation Protector, for which letters Patent were granted to me on the 4th of Nov. last, is designed to protect fruits, and such things as are easily broken, or damaged by being bruised, during the process of transportation, storing and handling; and more effectually and easily than can be done by the ordinary means. In Fig. 1 of the drawings, A, is a basket, or may be a box, or any other suitable vessel or receptacle to contain the articles to be transported; B, is the protector frame, and C, is the elastic fastenings by means of which the vessel, A, is combined with the frame, B, so that in what-

over position (when secured by a cover) they may be tumbled upon the ground, floor, or vehicle of conveyance, the vessel, A, with its contents, is supported within the protector frame; the frame, B, being enough larger than A, to project on all sides, so as to receive whatever shock, or jar, there may be; and the elastic fastenings, C, prevent the shocks or jars being transmitted to the vessel, A; these elastic fastenings may be rubber bands, or of any other convenient form, or material.



The form which I suppose will be most convenient is to have the vessel, A, cubical, or nearly so. If the load to be transported is very easily bruised, as strawberries, raspberries, and the like,—where lower ones are liable to be crushed by the weight of those above—they should be put in shallow boxes, as shown by Fig. 2, which are made to fit into the cubical one, and which will hold several of them; these shallow boxes may be of 1, 2, 3, 4 quarts each, or any other convenient size. When the load to be used does not require the shallow boxes, the protector may be used without them. For boquets, and other light articles, I propose to make paper boxes with bands of tape looped at suitable places to receive the elastic fastenings.

Whitinsville, Worcester Co., 1856.

AN EVENING WITH THE BOYS!

Mr. Webster, the great lexicographer, defines the word *civilization* as the state of being refined in manners from the grossness of savage life, and improved in arts and learning. But the being refined from the grossness of savage life, up to the present condition of society in New England, includes a wide range of virtues, customs and conventionalities, which we cannot now enumerate. Civilization is more than a change of manners, or an improved condition of the arts and learning; for it changes the current of thought and the affections of men, imparting higher views of life and duty, and introducing Christianity itself.

As true civilization advances, the world presents new aspects. Nature yields to Art. Villages, towns and cities spring up; the lower animals, the tides, winds, steam and machinery, perform the labor once exacted of human muscles, leaving human muscles and mind to search out new inventions, gain new stores of knowledge, and gather around the habitations of man new comforts, and elevate his state of being. But no influence of civilization is more striking than that which leads us to ameliorate the condition of the unfortunate of the great family, to feed the hungry, clothe the naked and shelter the homeless; to whisper consolation to the distressed, reclaim the erring, and give liberty to the innocent when oppressed; to love and venerate the aged, to devise wholesome restraints and comforts for those whose reason is dethroned, and visit prisons, to call back the guilty to the world and to moral health.

Well conducted prisons and institutions of reformation are no less evidences of a high degree of civilization than the school-house and the church, though we confess that the latter must greatly prevail. For "offences will come," and society must defend itself against offenders. So the school-house, the lyceum, the work-shop, the church, the manufactory, the institution for restraint and reform, are all evidences that the people are progressing; that they cry onward, higher, higher,—we cannot stop here.

One of the most munificent and noble evidences of this feeling may be seen in the "Reform School for Boys," at Westboro', in this State. It was founded by the *civilized* and magnanimous heart of the Hon. THEODORE LYMAN, whose name we love to repeat, and whose memory it is pleasant to cherish. A few days since it numbered within its walls six hundred and one boys, between the ages of five and twenty years. Alas! for our civilized age, that there should be so many! A large proportion of these are sent there simply for the offence of obstinacy and disobedience.

Last evening we had the pleasure—and the pain, too—of being with them, *five hundred and seventy-four* of them, and this is what we saw there.

In the ample and sweet kitchen were large kettles heated by steam; two of these contained about *four barrels* of boiled rice. And now, at 4 o'clock, P. M., comes a peal from the great bell in the belfrey of the east wing, and before its echoes have died away over the adjacent hills, the merry peals of hundreds of voices burst upon the ear. From the shoe shop, and the chair shop, the laundry and the sewing room; from the farm, the barn and stables, from kitchens, and bed-rooms, and galleries, with a whoop and a call, come the juveniles into the great central yard. And now see the gymnastics, the ground and lofty tumbling, racing, wrestling, and jumping. One prefers standing on his head awhile and swinging his heels in the air, while another has a Sinbad on his back whom he cannot well shake off. They shout, leap, laugh, and rush to and fro, just like a parcel of healthy boys who have been restrained, and have got their legs and lungs again, and then rush into two immense bathing-rooms for a wash, where the water flew in jets, in spray, and in dipper and buckets full, and presto, in a moment they all stood in a line, like a flight of stairs, the tallest at the top, before the great dining hall.

No church-yard could be more quiet now than this. Step, step, step, softly and quietly, they file into their places. At a single shrill note, all turn to the tables, and with the ends of the fingers of the right hand resting upon them, and the head slightly inclined forward, they repeat a formula—"*Merciful Father, make us thankful for this food, and for all our blessings; may it strengthen and refresh us. For Christ's sake. Amen.*" Then, with military precision, all sit down. Boiled rice with molasses, and plenty of cold water, makes their frugal meal; but they ate, as they played, with a will.

About twenty minutes are occupied in eating, and then they assume what is called "the first position" —that is, each boy sits uprightly, and places his hands in his lap, then all rise and pass out in the same order in which they entered. A few moments were then given to play, and all left for the school rooms.

There are four of these, fitted with modern desks, seats, black-boards and maps. We visited each school, and felt a glow of gratitude that these unfortunates were in such admirable training. At half past six the Chaplain entered—the folding doors being opened and two school rooms thrown together,— and said, "We will repeat the first psalm, which was done slowly and distinctly, and with apparent unction. A portion of Scripture was then read, and the Chaplain closed with a short and fervent prayer. Then all stood, dumb as statues, so that the ticking of the clocks were plainly heard, until a signal, scarcely recognized by the spectator, announced that they might move. They then repaired to the two great halls, or dormitories, each containing three hundred beds. Along one side of the hall are three rows of sleeping apartments, each about four by ten feet; the two upper tiers are approached by stair cases and galleries. The upper portion of the door has an open space, but crossed by slight iron rods; the doors were all thrown back against the ceiling. Each boy went directly to his room, and laid his right hand on the opening at the top. On the other side of the hall were two rows of berths, three tiers high, and those boys who did not go to the small rooms now stood in a straight line in front of the berths. Then, with eyes closed, and head slightly depressed, there arose a whisper which filled the vast room, soft, but articulate and harmonious—"*Our Father which art in Heaven, hallowed be thy name; thy kingdom come; thy will be done on earth as it is done in Heaven. Give us this day our daily bread, and forgive our trespasses as we forgive those who trespass against us. Lead us not into temptation, but deliver us from evil: for thine is the kingdom, the power and glory forever. Amen.*"

A slight pleasant sound was now heard, like that made by a large bird's wing in motion, and was occasioned by closing the doors of the sleeping rooms; the sharp click of the spring-lock followed, and silence reigned supreme. The boys were left to their thoughts, and dreams, and slumbers, until the great bell should disturb them again at 5 o'clock on the following morning.

The people of Massachusetts may be taunted as "mere pedlers, and publishers, and artizans—as Greeks to do the bidding of the noble Romans," but *her institutions* speak what she is, and have already gained the meed of praise from the *civilized* and good every where.

For the New England Farmer.

COTSWOLD SHEEP.

An Old Acquaintance of the Publisher—A Progressive Age—Canals—Railroads—Shelter of Animals—Devon and Durham Cattle—Cotswold Sheep—Profits of Raising them—Implements—Eagle Plow, No. 78½.

FRIEND NOURSE:—Since the ever memorable Union Plowing Match, at Bridgeport, at which time I first made your acquaintance, I have seen or heard little of you, except through our agricultural papers, especially the *New England Farmer.*

Since the publication of that journal commenced, what changes have taken place in our country! At that time, not a canal or railroad had been constructed in all the land. Now, instead of stages conveyed by horse power, over rough and hilly roads, we can take our seat by a warm stove and whirl away at the rate of forty to fifty miles per hour, to almost any part of our country.

In agriculture, too, the change has been scarcely less visible. Then, who ever thought of a cellar to a barn, or any other shelter for our domestic animals from the chilly blasts of winter than the south side of a rail fence, or at best, a stone wall? Who had ever thought of converting a load of swamp muck into a first-rate load of manure? Now, who that is worthy of the name of a progressive farmer, builds a barn without a cellar, over which his cattle are placed out of the reach of a drop of rain or a flake of snow, and in which scores if not hundreds of loads of muck are placed as an absorbent of the liquid portion of manure? The products of almost any barn may be doubled in five years by this method of saving and manufacturing of manure.

The beautiful Devon and Durham cattle, which now grace the farm-yards of so many of our modern agriculturists, give evidence of progress in this branch of agriculture, especially when compared with the long-legged, hump-backed, slab-sided brutes so often seen in former years.

In nothing is progress more visible than in some of the improved breeds of mutton sheep. The noble Cotswold, varying in live weight from two to four hundred pounds, whose kind and orderly disposition, together with his great weight, are a sure preventive against rambling or jumping, when compared with the little inferior Saxony, varying in live weight from fifty to seventy-five or a hundred pounds, shows a vast improvement.

For the last seven years I have been breeding the Cotswolds. I have now on hand several two-year old wethers, weighing over two hundred pounds each, and a pair of twin lambs, seven months old, weighing one hundred and ten pounds each, and wool seven inches, making the growth an inch per month—a sample of which I send you. These

lambs are worth, in some of our village markets, six cents per pounds, to which add the value of the fleece, $1,50, make $14,80. At these figures, what can a farmer do better than to breed mutton sheep? I one year exhibited a Cotswold sheep and her three lambs, (all at a birth) whose average weight was one hundred and four pounds; at another time, one with three, weighing one hundred pounds each. These were all brought up on the sheep, without extra feed, and weighed, at six months old, the above weights. In an adjoining town, last winter, wethers of this breed three years old were sold for $25 per head, and sent to New York market. These prices give larger profits than can be realized from breeding any other kind of stock. Yet remunerative as the raising of this breed of sheep is, for market purposes, there is still a greater profit in rearing them for breeding purposes. There is a demand for this breed of sheep, from all parts of the country, which is not half supplied, and can not be for years to come.

My flock at the present time consists of fifty-three, and so orderly are they, that a stone wall of three feet in height is, in most cases, sufficient force against them. The Bay State, surrounded as it is on every side with the best markets, must be well adapted to the raising of mutton sheep. Who of your enterprising farmers will form themselves into a company for the purpose of breeding fine flocks of Cotswolds?

In implements, too, there has been as great improvement as in anything. There is a plow of your construction (Eagle No. 73½) beggars any attempt at further improvement on the plow. From several years' experienee in the use of this plow, as well as from very extensive and minute observation, I am convinced that this No. 73½ is the most perfect plow ever made, and one which will not soon be surpassed in excellence. T. L. HART.

West Cornwall, Ct.

For the New England Farmer.

WHEAT.

It has been remarked that wheat could be raised on land where potatoes would do well. That was probably before the disease in potatoes, and when they were generally planted in moist and rich ground, which now-a-days is not the surest way of raising sound ones, at least. Dry land, and not very rich, is now the rule. Will the first remark hold good applied under this later rule? I think that 8 or 9 bushels from 1 of seed, can be raised on ordinary dry land, and be made as sure a crop as corn. In the first place, lime, at the rate of 2 casks per acre, must be applied. Dr. Jackson said 2 to 4 casks at first, then afterwards as much as appears to be needed. An old way, and perhaps as good as any to prepare the seed, is, to soak it in brine an hour or two, and then roll the seed in lime. Sow pretty early, when the ground is in the right condition for it. Seeds come up best always when the land is newly plowed. This grain is the best of anything to sow with grass seed, as the young grass seems to do better with wheat stubble than any other. A little guano sown on the grain and grass in a wet day the early part of their growth, will help both amazingly. Try it. A kind of the spring grain is coming about here which looks well, and succeeds well, so far. It is called the China wheat. Winter wheat does not answer the expectation of those who have tried it here; this should not be sown after the first week in September, and should be buried deeper than spring grain. In the middle States oats are sown with the wheat; the frosts kill the oats, thereby protecting the wheat from cold.

Winter grain should be free from standing water, which in the wheat-growing States is effectually done by plowing and sometimes cross plowing, so that the dead furrows are not more than 12 feet apart, one or both ways, as they happen to plow once or twice. For winter grain a good covering of snow is the main thing, north, east, south or west.

JOSEPH W. BROWN.

Kensington, N. H., Dec., 1856.

For the New England Farmer.

INSECTS THAT INFEST THE APPLE.

MR. BROWN:—The Concord Farmers' Club recently discussed this question nearly as follows—making suitable allowances for the imperfections of the secretary's record:

J. B. FARMER said, * * * * the *borer* exists in three stages or modes of life; first, as a larvæ, or grub; second, in an inactive or transitory state, as a pupa; third, as a beetle, or bug. The beetle lays its eggs during the latter part of June, or first of July, in the bark near the foot of the tree. From these the larvæ are hatched, and in course of the season eat their way to the wood. After feeding on the wood for about three years, during which time they usually eat from ten to twelve inches in an upward direction, they come out of the wood and make a cell between that and the bark, remaining here in the pupa state till they grow into the beetle form; and then, usually about the first of June, they gnaw out, and appear as full-grown and perfect beetles. They come out in the night. It is also their habit to fly about and to feed only during the night, remaining concealed during the day. Trees that have suckers around the trunk, Mr. F. thought, are more likely to be infested by the borer, because the suckers serve to protect the eggs and grubs from their enemies, the chickadee and woodpecker. If neglected, the infested tree is always injured, and often destroyed. The full-grown borer is about three-fourths of an inch in length; the under side of the body being of a dull white color. It is, in its general appearance, much like the borer that infests the pine. A strong potash lye, applied in July, will destroy the eggs and young larvæ. The *aphides*, or lice which infest the young shoots of apple and other trees, are exceedingly prolific. Reaumer calculates that "one individual in five generations may become the progenitor of six thousand millions of descendants." Mr. F. quoted Harris, as saying that the egg of this louse is laid in autumn, upon or near the leaf-bud of the plant upon which it lives; and is hatched in the spring following. All these spring hatched lice are females, and without wings; and they have the ability to produce their young without the assistance of males. Their progeny are produced alive, not hatched from eggs. They also are all females; and the race is thus continued for several generations, all wingless, too, till the fall of the year. Then a generation is produced, consisting of both males and females. These soon acquire wings and pair; and the females lay the eggs which are

to continue the species the next season. Another pest to the orchardist is the worm that destroys so much of our fruit. Mr. F. said he could perceive no difference between this apple worm and that which destroys the plum. The best way to destroy them is to pick up the fruit as soon as it drops, and feed it to hogs or cattle, or let the animals run in the orchard. There are three or four generations of this insect in one season.

E. W. BULL said, whale oil soap is a complete preventive of the borer. His neighbor, J. B. M., rubbed soap on a tree that was badly infested, and killed the borers. There is a bark louse which is very common, appearing something like the half of a grain of wheat divided lengthwise, and glued to the bark of the tree. A strong wash of the whale oil soap will kill them. The aphis on the young branches may be destroyed by bending the branches and dipping them into a solution of whale oil soap. The woolly aphis may be killed with a brush dipped in the same liquid. Mr. B. thinks the beetle that lays the egg producing the apple worm is not identical with the curculio, or plum weevil. The grub is larger. He has found that cotton batting tied tightly around the trees, entangles the curculio as it ascends the tree in cool weather. In warm weather, it readily flies into the tree. They may be caught by spreading a sheet under the tree, and then giving the tree a sudden shake, which causes the insect to drop upon the sheet. Mr. B. thinks the curculio is rapidly increasing in numbers. He supposes that in their flights they follow the prevailing winds. They fly low. A fence ten feet high, around a garden in Cambridge, has mostly kept them out. The rose bugs should be collected and put into scalding water. Soap suds will not kill them. Nothing will eat them but the king-bird and the peewink. A row of rose bushes on the windward side of an orchard, will be, to some extent, a protection, as they prefer the rose bushes, and may more readily be collected from them and destroyed. He has waged war against them for many years, and now they are not so abundant by far as they were a few years ago. The canker worm, he said, had not yet been very troublesome away from the seaboard; at least, not in this immediate neighborhood. But they are sometimes found here, probably brought along by carriages upon which they had dropped. He had found them on one of his elm trees, a few years ago. He put a brood of chickens under the tree, and they ate the worms greedily, as they dropped, or were shaken down by the wind. He thinks the hen and her young brood may be made valuable auxiliaries to us against the various insect tribes. Tarring is, in his opinion, an unsightly remedy, and after all, not effectual. A portion of the canker worm moths come to perfection, and lay their eggs in the autumn; and these eggs will stand the severest frosts, without injury to their vitality. But the greater part of the moths do not appear till the next March. Their eggs are hatched in the early part of May. The worms feed till about three weeks old; then they begin to descend and burrow in the ground, where they undergo their transformations. John Lowell spaded the ground under his trees late in the autumn, and spread lime as far as the branches extended, and by this means saved his trees. Muriate of lime has been recommended for the same purpose. Mr. B. thinks if we mix soft soap and clay to the consistence of a thick paste, and rub it on our trees, it would be serviceable. It has been found to keep off the borer. He has tried potash lye, and given it up. An old tree, that has rough, thick bark, can bear a strong lye, but smooth young bark is too tender for it. He uses whale oil soap instead; this is perfectly safe, and quite effectual—except on rose bugs.

Dr. REYNOLDS said, some orchardists have been unable to raise apples, and supposed there was some deficiency, or some bad quality in the soil; but on examination, found there was sufficient reason in the ravages of the borer. On using diligent care to remove and prevent that pest, there was no difficulty in raising fruit. The borer beetle deposites its eggs in June and July. In August, if we scrape off the outside bark, we can find and destroy the young worms, without injury to the tree. The grubs live in the bark a good while, eating the inner half of the bark, and making a considerable cavity. This enables the woodpecker and chickadee to find and eat them. After a few weeks, they work their way into the wood. Some continue in the larvæ state only one year; but the greater number from two to three years. They sometimes work through and through small trees, completely honeycombing them. One gentleman had found thirty of these grubs in a single tree. Mr. Dickinson, of New York, says a piece of soap put into the crotch of a tree, will keep off the borer. We cannot reach the borer with a syringe, because he stops up the hole behind him with his chips. If we take a strip of bagging and tie around the bottom of the tree, about the last of May, the insect will lay its eggs in that, and the larvæ, when hatched, will die for want of nourishment. The plant lice are often carried on young trees from nurseries. They were carried to Wisconsin on two small sweet apple trees, and from that small beginning, spread rapidly over the State. The shell louse produces from ten to thirty eggs in the spring; these are retained under the shell of the parent, are hatched in May, the mother perishing, and leaving her shell as a shelter for her young brood. An alkaline wash will destroy them.—Some species of the louse feed on the leaf, others on the bark. It is yet a mooted question, he said, whether the apple worm, and that which infests the plum, are identical. The apple worm is larger, but is similar in its habits; and perhaps the food makes the difference. Many of the worms leave the apple before it falls, sometimes passing through the various stages, and producing a new generation in the latter part of the season; but more generally remaining in its sheltering cocoon till the next spring. The apple worms are increasing rapidly, and fears are entertained by some, that we shall by and by be obliged to give up the culture of the apple. The old remedy for the canker worm was a strip of sheep skin with the wool on, wound tightly around the tree. There are several methods of preventing the ravages of the curculio. It may be done to some extent, by syringing the tree with an alkaline wash, or by throwing quick lime over the tree when wet with dew or rain a few times, while the fruit is small. Dr. R. said, that in one season recently, his plums were all destroyed. The next year, by using lime, he saved a bushel of good sound plums. He thinks tarring the trees will prevent most of the females of the canker worm moth from climbing. Canker worms do not usually operate more than three years at a time in one local-

ity; then disappear for a series of years. Cultivated trees are less subject to danger from insects than others. Feeble trees are most likely to be attacked. He does not consider strong potash lye a safe application. Ashes and water, or strong soap suds, are equally effectual, and perfectly safe. A peck of ashes, or other alkaline substance, put to the root of a tree, tends to keep off the borer.

JOHN REYNOLDS suggested cotton batting wound around the tree, as a hindrance to the ascent of the female canker worm moth. Many can be caught while entangled in it. One gentleman had found it quite advantageous.

SIMON BROWN thought if trees were in cultivated ground, and washed once or twice a year, at the right season, they were not in much danger from the borer. A practised eye readily detects the marks of the borer, and a gouge may be used to dig them out, or a wire may be thrust into their holes and kill them. Potash lye, if used as strong as some recommend it, is not safe. He once had occasion to notice a young orchard in Framingham, that was much damaged by its use. On the south side of many of the trees a strip of bark was killed, and the bark of most of them was discolored. Has seen young orchards utterly ruined by the use of too strong a lye. He examined a young orchard belonging to Mr. Buckminster, treated with lye, but his trees did not appear to be injured. If trees are healthy, and not infested by insects, there is no need of washing. But he sometime washes to take off moss.

E. W. BULL said that Loudon tried an experiment on two young trees, to test the value of washing. One was washed, the other let alone. At the end of the year, the washed tree was nearly twice as large as the other. Probably, the wash afforded nutriment or a stimulant to the tree, besides preventing drafts upon its juices by vegetable and animal parasites.

JOSEPH D. BROWN thought there would not be sufficient nutriment in the wash to make so great a difference in the growth, especially as the feeding rootlets were mostly at too great a distance to find much of it.

JOHN REYNOLDS mentioned a gentleman who had successfully used spirits of turpentine as a remedy for the borer.

Mr. BULL said the late Mr. Phinney, of Lexington, tried the same experiment, and killed his *trees*.

SIMON BROWN said he had found an old dust-brush the best instrument for destroying caterpillars on small trees.

Mr. PRATT had found the round, pointed caterpillar brush, fixed to a long pole, a very efficient instrument for the destruction of caterpillars. His method is, to carry with him a bucket of pretty strong soap suds, and dip the brush into it, both before and after it is twisted into the nest. Every caterpillar that is but touched by the soap suds, is sure to die. M. P.

VERMONT.—Through the politeness of GEORGE F. HOUGHTON, Esq., of St. Albans, we have before us a preliminary report on the Natural History of Vermont, by which we learn that on the 29th of February, 1856, AUGUSTUS YOUNG, Esq., was appointed State Naturalist. Mr. Young was appointed to fill the place made vacant by the death of Professor ZADOCK THOMPSON, a brief biography of whom was given in our columns a few months since. By reference to acts of the legislature, we find that provision has been made for a thorough geological and mineralogical survey of the State, under the three followings titles, viz:

First.—Physical Geology, Scientific Geology and Mineralogy.

Second.—Economical Geology, embracing Botany and Agriculture.

Third.—General Zoology of the State.

We hope the project will be faithfully carried out.

For the New England Farmer.

PATENT OFFICE REPORT.

BY HENRY F. FRENCH.

Swamps and Mill-Ponds—Draining of Haarlem Lake—the Potato Disease, as Affected by Color, Form, Early or Late Planting, &c.

Every farmer in New England who understands his true interest, and that of his neighbors, is interested in every fact that relates to draining land. There are hundreds of acres in almost every township of what we call *swamp* land; too low and too wet for present cultivation, but just low enough to have received the rich washings of the hills, and the flying autumn leaves for centuries. In many places, there are *ponds*, or mill-privileges, where hundreds of acres are flowed by some saw-mill or factory, and the stagnant water is kept up just high enough in dog-days, to generate fevers and other "rebellious diseases;" covering, as on the Concord River in the Bay State, large tracts of the most valuable lands, in localities where such land, if dry, would be worth more per acre than the price of factory shares. These swamps, and ponds, and stagnant meadows, might all be drained, and afford vast tracts of easy and fertile land, equal to the bottom lands of the West, and right by the doors of the young men who leave their homes with regret, because the rich land of the West offers temptations which their native soil cannot equal.

"But," asks some amazed factory agent, "what is to become of our mills? Will you take away our vested rights, and stop our wheels, tear down our dams, and turn our operatives out of employ?" Certainly, no such violent measures should be adopted. Suppose, however, we have careful surveys made, or use those which the companies already have, and should ascertain that a factory or two flows and ruins by its back-water, ten thousand acres of rich alluvial soil in Middlesex county worth, the moment the water is lowered to its natural course, one hundred dollars per acre, or a million of dollars in all. That tract of land, at the rate of population which subsists in a great part of Holland upon agriculture, might sustain, at the rate of one person to each acre and a quarter of land, an agricultural population of 8000 people!

Now, gentlemen stockholders, cannot you make a better operation of it, instead of running your mill by water power, just to adopt *steam*, which is more steady, and soon must be cheaper than water power, and form a land-draining company; take down your dams, let nature have free course with her softly-flowing rivers, and allow the promise to be fulfilled, that the earth shall be no more cursed with a flood? The lands thus exposed would be of alluvial soil, of course, free from stones, and from stumps, ready for the plow, at once, and as fertile as the banks of the Nile.

At no distant day, these things will come to pass, and to encourage that reasonable hope, see what says our untiring friend, D. J. Browne, about

THE DRAINAGE OF HAARLEM LAKE.

This lake *was* in North Holland, in Europe, and covered 40,000 acres, being 33 miles in circumference. Its bottom was more than thirteen feet below the lowest tide of the bay into which it emptied. Such it was in 1839. Now, no lake is to be found; but in its place, in October, 1855, when Mr. Browne visited it, "what had been the bed of a great lake, was then a region of exceedingly fertile land, in a fine state of cultivation. It was dry, comfortable and healthy. Numerous neat, quaint and conveniently constructed cottages were seen in various directions; a population of about two thousand dwelt within the *palder*, (or tract below the level of the sea,) fields of verdure extended far and wide, enlivened by cattle, horses and sheep, grazing on the fruitful meadows."

Think of such a scene in the bottom of a lake! and a lake not in a well defined basin of solid rock or earth, but surrounded, in great part, by wet and marshy lands, so soft and spongy that portions of it rose and fell with the tide. The leading object of reclaiming this tract from the fishes and frogs, was not so much to subserve the purposes of agriculture, as to prevent the dangers of inundation, the waters of the lake having once been driven by the wind over its banks to the serious injury of the city of Amsterdam, some four miles northeasterly of it; and at another time in the same year, 1836, the city of Leyden, on the opposite side, having suffered a like calamity.

The work was performed by the Government at the expense of about eighty dollars an acre. A canal of some 140 feet width, 9½ feet depth, forty miles length, was cut around the lake, a dyke was formed between the lake and canal, and when all was ready, the water of the lake was all pumped out by steam-engines, which are still kept in readiness to remove any surplus water that may, by leakage or breaking away of the works, endanger the security of the inhabitants, or injuriously affect the fertility of the soil. It is estimated, that the land thus rescued from the dominion of the sea gods, is of twice the average value for cultivation of the lands of Holland generally, there being no waste land in the tract. Upon that estimate it is capable of supporting 70,000 persons! or double the present average population per acre of the two Provinces of Holland.

Although, perhaps, we may have no lakes to spare in New England, yet there are many tracts, both on the shores of the sea now flowed by the tides, and upon the banks of rivers, occasionally drowned by freshets, which might be profitably diked and drained. Then we have alder swamps and fresh meadows scattered through all our towns which will better repay a judicious expenditure in draining, than any other farm operation. On the whole, draining, *draining*, DRAINING, are the three things for this generation of farmers to attend to, as a general improvement in Husbandry.

THE POTATO DISEASE.

While farmers have become almost discouraged in attempting to comprehend the workings of this disease, while the ten thousand dollars reward offered by Massachusetts for the discovery of its causes and remedy remains safe in her treasury, Science has been quietly working away, year after year, in Prussia, comparing fact with fact, noting the most trifling circumstances, until some very valuable results seem to have been attained. The observations were conducted in the years 1852, 1853, 1854, under the direction of Government officers, with reference to several points, which had before attracted attention. Space can only now be devoted to a brief statement of the results of these experiments. The whole article may perhaps find room in some future number of this paper.

As to the color of potatoes most disposed to disease. It was found on trial of hundreds of varieties, that the white and yellow potatoes rotted most, the reds less by nearly one-half, and the blues not at all, although it is not to be inferred that the blues are always exempt.

As to the form of the potatoes most disposed to rot. It was found that of the *round* or roundish potatoes, about one-eighth of the varieties were diseased, of the long potatoes, in which were included only those whose length was twice their breadth, about one-fifth, a much larger proportion, were affected, and of the *Kidney* shaped none were diseased. It was found also, that early potatoes were less liable to disease than late ones—that those planted close, one foot apart each way, rotted more than those more open, 1½ by 2 feet apart, and that the wet portions of the field rotted more than the dry. It was further observed, in these experiments, that varieties recently produced from the seed or balls, were no more exempt than others from disease, and that fields planted consecutive years with potatoes were not more affected than those planted but one year, though the crops seems to have been depreciated in quantity, and quality.

Farmers can readily compare their own experience with these results. So far as my own observation extends, they would tend to confirm these observations generally, though with some modifications. The white chenango, and all the other long white potatoes, have been most subject to disease. I have never heard that Kidney shaped potatoes were more exempt than other varieties. Early planted potatoes have, I think, usually stood the best chance, and dry or well drained land is certainly better than wet land, to prevent the disease. The favorite variety for the table, with me and my neighbors, just now, is the round blue or pink potato known as the Dover, or Riley, or Worcester potato. It was introduced by Capt. Riley into Dover, N. H., and hence those names. It was exhibited at the Mass. Horticultural Exhibition last summer, as the Worcester seedling. With us, it is a first rate table potato, yields well, when highly cultivated, and rots less than any other variety that is fit to eat. Excepting that it is rather a late than an early variety, it tends to fortify the conclusions of our Prussian friends.

EXTRACTS AND REPLIES.

DRAIN TILE

Are advertised in your paper, "manufactured by Crafts & Beals, Whately, Mass., Nourse Mason & Co., Boston, Agents. Yet, in your November number, in an article by Henry F. French on "Thorough Draining," he speaks of procuring tiles from Albany, and the same thing was done to try an experiment in draining on the State Farm at Westboro'.

Why go out of our own State to procure for its uses that which can be had cheaper and better at home? "STATE RIGHTS."

REMARKS.—We certainly can see no good reason why our people should not send to Whately for what tile they wish to use. We are assured that the Whately tile are superior to the Albany. Messrs. Crafts & Beal are men of integrity, and ought to have a host of customers in this State. The tile are needed on most of our farms, and in many instances, are cheaper than stones.

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I have two shoats in a small barn cellar where there is some manure collected from the cattle-yard during summer. I also keep a horse and cow in the barn over the cellar, and the manure is daily dropt into the cellar below. Is it advisable to still keep them there, or what is your opinion?

Is barley meal good for cattle or milch cows, or would it be more profitable to sell the barley and buy corn to feed to cattle? J. POTTER.

Hopewell, R. I., 1856.

REMARKS.—Pigs require a warm and *light* place; light is indispensable to health and thrift. If the cellar has these two requisites, together with a proper ventilation, and plenty of clean and nutritious food, your pigs ought to be in a happy condition, and give you a good return for your attentions. Let the sun in upon them if you can.

Barley, meal *is* good for any stock, and we can see no necessity of going through a course of exchange to get it into corn meal. Your milch cows will always be glad to see you approaching with a bucket of barley meal.

—

APPLE TREES—HORSES.

MR. EDITOR:—1. I sowed a nursery in Dec., 1854, with sweet winter apple seeds; what probability is there that the trees will bear such fruit, so that it would be safe to leave some ungrafted?

2. I learned from one of Fowler's books that a person could tell from the shape of a tree, its bark, leaf, &c., what was going to be the fruit. Can you give me any information in the *N. E. Farmer*, or direct me to any work on the subject?

3. I intend to set out an orchard, soon, on good corn land of two or three different kinds of soil; first, stiff loam, not very stony, medium red; second, light, stony, pliable loam, dark brown, stony open subsoil; and third, a very light, vegetable mould, almost sand when dry, grows rank weeds, &c. The whole slopes to the south and slightly to the east. Now can you divide the usual list of apples in two or three parts to suit the different soils, so that each kind will have its appropriate soil?

4. Can you refer me to an elementary work on the subject of horses, colts and mares, so that an ignoramus like me can learn to buy, raise, break and manage them with some prospect of success?

5. Can you tell me anything about creosote as a curer for meat—anything practical, I mean?

Clarence, Nova Scotia. WM. R. DODGE.

REMARKS.—1. Very little indeed; but by leaving a few trees in their natural condition, you may find a new fruit which will prove worthy of cultivation; but there would be, perhaps, not one in a hundred that would be good.

2. Skilful nurserymen will often tell a Baldwin, Hubbardston or Greening by the appearance of the tree, because they differ not only in the form and size of the leaf, but materially in the spurs and branches and general formation of the tree. But they would find it difficult to tell what fruit would grow on a seedling by the appearance of the tree.

3. No, Sir, we possess no such skill,—nor can we refer you to man, or book, who does possess it.

4. Linsley's new work on the Morgan Horse will be a great help to you in that way, if you really are a novice.

5. We know nothing of *creosote* in curing, nor, indeed, do we desire to, only to let it alone. It is one of those powerful irritants which ought to be kept away from every thing we intend to eat.

—

HOW TO TAN CHAMOIS SKIN.

In answer to the question about *tanning chamois skin*, I will state that my experience with a backwoodsman in the Nevada Mountain was to use the brains of the animal killed and make a liquor of it. After soaking the hide ten days in water, take from it a thin film upon the inside, which will

readily come off with a knife. Keep it a fortnight longer in the liquor, and then color the skin to your fancy.

I will send a specimen done in that way, colored with a yellow flower that grows wild in the mountains. My companion always told me that the brains of all animals would tan their own skin.

Malden, Dec., 1856. E. W. B.

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TO CLEAN PICTURES.

MR. EDITOR:—In reply to a subscriber's question, "How shall we clean pictures," which appeared in the *Farmer* for Dec. 9, I subjoin the following extract from the Autobiography of Goethe; it being the only method that I have ever seen for renovating engravings.

"The Roman views which hung for many years on the walls of the old house, had become very yellow through the light and smoke and dust, and not a little unsightly through the flies. My father wished that these engravings might be restored as much as possible. It was well known that this could be done by bleaching, and the operation always critical with large plates, was undertaken under rather unfavorable circumstances. For the long boards on which the smoked engravings were moistened and exposed to the sun, stood in the gutters before the garret windows, leaning against the roof, and were therefore liable to accident. The chief point was, that the paper should never thoroughly dry, but must be kept constantly moist; this was the duty of my sister and myself, and the idleness which would have been otherwise so desirable, was excessively annoying on account of the tedium and the watchfulness which allowed of no distraction." A.

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TO KEEP BACON.

I take it in the spring of the year, before any insects make their appearance, and wrap in paper tight as convenient, pack in a barrel and fill in with oats to prevent their touching each other; then cover the barrel tight so as to exclude air and insects. In this way I have kept hams throughout the "hottest weather." ONTARIO.

December 22, 1856.

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FINE DUST ON CHEESE.

The *Green Mountain Farmer* says—"We would advise oiling them with melted butter, sprinkled with red pepper. A damp, mouldy cellar is favorable to mites. No cheese should be kept till 'old,' unless it be made of new milk, when it will not be necessary to keep it in a very damp place, and very little trouble will be had with these mites."

—

TO CURE PORK HAMS.

To sixteen pounds of ham, take one pound of good fine salt, two ounces of saltpetre, five ounces of sugar—all pounded together and rubbed on carefully. Turn them and rub them all over, once in two days, for fourteen days, with the mixture, and then smoke them. This method has been tested by the experience of years. No brine is needed. The process is always successful, and the hams are well flavored. TIMOTHY M. COOLEY.

Granville, Nov. 24.

FRENCH MERINO SHEEP.

MR. GEORGE CAMPBELL, of West Westminster, Vt., has recently sold 28 full-blood French sheep to B. F. Dinsmore, of Anson, Maine. Mr. Campbell has visited France and selected stock himself. We met him at the late U. S. Show at Philadelphia, with some of his sheep, where we believe he also effected sales. He knows what good stock is, and sells only the best.

—

GROWTH OF CATTLE AND KEEPING.

I wish to inquire through your columns at what age neat stock can reasonably be considered to be full grown, and also, what is the cost of keeping, during the foddering season, of the various ages from one year old, and so on to their full growth?

Rehoboth, Dec., 1856. H. B.

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SAUSAGE-MAKING—PUMP FROZEN.

At this sausage-making season, perhaps many of your readers will find it convenient to use the following rule: To ten pounds of meat; put one gill of salt, one gill of sage and one-half gill of pepper, or, if preferred, one-half the quantity of sage and one-half gill of summer savory.

Remember, if the pump freezes, pour hot water on the *outside*. M. A. K.

Fitzwilliam, N. H.

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SUGAR CANE SEED.

ALEXANDER S. PHELPS, Sharon, Vt.—We have not the seed to distribute, but NOURSE & Co., 13 Commercial Street, Boston, to whom we have handed your order, will have a supply by steamer in January.

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BLACK TEETH IN PIGS.

S. K. W., of Boston, states that if the teeth which are turned black, in the disease called "black teeth," are extracted the animal will soon recover.

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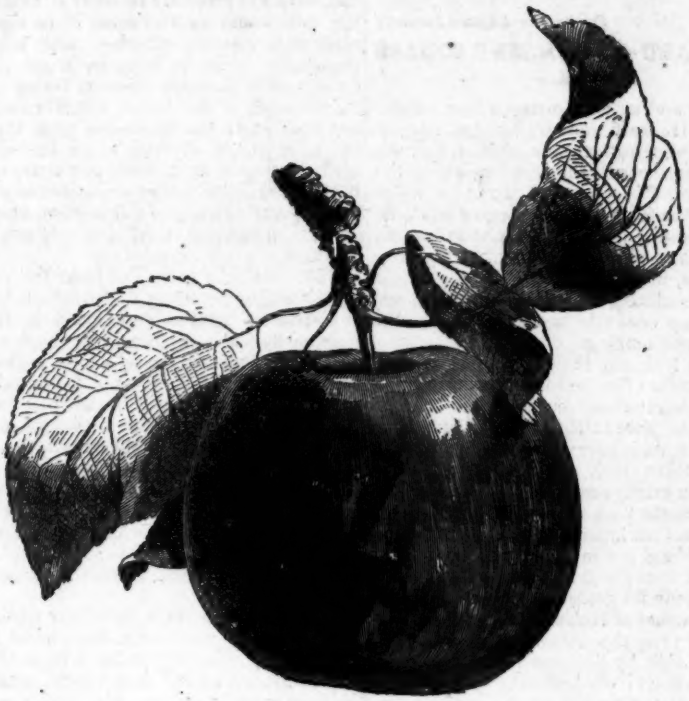
Mr. B. TISDALE, of Bradford, Mass., has a calf, native and Durham, six months old, that weighs 510 pounds.

COL. POORE'S ADDRESS.—The Address before the Essex County Agricultural Society at its last exhibition, was by Col. BEN. PERLEY POORE, of West Newbury. It is a carefully written historical sketch of the progress of the early settlers, with an Agricultural basis. But it has pages of downright practical remarks which the farmer may read and profit by. The Col. does with a will whatever he undertakes, and this production shows that he has plowed the land as well as ocean, and knows something about *apples* and wheelbarrows, corn crops and cabbages, and that he is really interested in agricultural improvements.

☞ The *Journal* says that $7000 of the $10,000 required by the Legislature to be raised by the Female Medical College in order to entitle it to receive the $10,000 appropriation, has already been secured.



POMME DE NEIGE.

FAMEUSE.—*Forsyth.*
SANGUINEAS.

The beautiful engraving which we give above, was copied from an original plucked by us from a tree in the garden of President WHEELER, at Burlington, Vt. in September last. Is it not a gem? The artist has most faithfully sketched every peculiarity in spur, leaf and fruit, and made it almost the living thing which we saw hanging so gracefully and invitingly on the tree. The name of the Artist, JOHN N. HYDE, ought to go with his sketch, and we find pleasure in bringing them together.

The Pomme de Neige, or "Snow Apple," is a celebrated Canada fruit, and takes its name from the snow-white color of its flesh. The tree is hardy, of a pendent, graceful form, bears regularly, but not profusely, and the fruit is in eating in October and November.

Fruit, medium size, roundish, somewhat flattened. Skin with a pale greenish yellow, mixed with faint streaks of pale red on the shady side, but marked with blotches and short stripes of darker red, and becoming a deep red in the sun. Stalk quite slender, half an inch long, planted in a narrow funnel-shaped cavity. Calyx small, and set in a shallow, rather narrow basin. Flesh remarkably white, very tender, juicy and good, with a slight perfume.

THE OLD WOOD FIRE.—People who have seen an old fashioned wood fire, will recognize the truth of the description of "Peter Parley," as follows:—

"The fuel was supplied from the wood lot—sweet scented hickory, snapping chestnut, odoriferous oak, and 'reeking, fizzling ash.' It was a goodly sight to see these stalwart products of the forest laid in large piles, all alive with sap, on the tall, gaunt andirons. You might have thought you heard John Rogers and his family at the stake, by their plaintive simmerings. The building of a fire was a real architectural achievement favored by the wide yawning fire-place, and was always begun at daybreak. There was first a backlog from fifteen to four-and-twenty inches in diameter, and five feet long, embedded in the ashes; then came a top log, then a fore stick, then a middle stick, and then a heap of kindlings reaching from the bowels down to the bottom. A-top of all was a heap of smaller fragments, artfully adjusted, with spaces for the

blaze. Friction matches had not then been sent from the regions of brimstone, to enable any boy or beggar to carry a conflagration in his pocket."

For the New England Farmer.

THE HUBBARD SQUASH, AND SQUASH BORER.

MR. EDITOR:—You were certainly very unfortunate with the Hubbard squash; but not more so than a friend, who, from a piece of land which in 1854 yielded nearly twelve hundred weight of this variety, obtained this year but about a dozen pounds. But the failure of the marrow was with us, on the peninsular portion of this town, equally striking; a farmer who planted about half an acre to the marrow, within eight or ten rods of the piece above mentioned, offered the crop, as I am informed, to any one who would gather it—the yield being almost nothing.

Between the 10th and 20th of June I planted about three-fourths of an acre to squashes, planting the Hubbard, marrow and custard side by side, four-ninths of the piece to Hubbard, three-ninths to marrow, and the remainder to the custard. After the bugs had taken their quantum, enough were left under on an average season to fairly cover the ground. About the time of blossoming the squash borer commenced his inroads, and made sad havoc among the Hubbard and marrow, and a few hills of the custard that were planted in low ground. When the crop was ready for gathering several remarked that the two patches of Hubbard had suffered less from the borer than the marrow, though in each case they grew side by side, one patch of each in the upland and one in the lowland. On weighing the two crops the difference was as striking, the yield of both patches of the Hubbard, ripe and unripe, being about thirteen hundred and fifty pounds, while the marrow yielded, ripe and unripe, but eight hundred and fifty pounds.

A single result does not establish a fact in agriculture, but this yield, under circumstances equally favorable, certainly *tends* to show that the Hubbard is, at the least, as hardy as the marrow squash.

I therefore infer, Mr. Editor, that your fortune was a "sport of the season," and with great pleasure forward a few seed, that you may try again, but with this condition, that you shall not hold me responsible for the "sport" that may be developed next year, should the product of any of them be a custardo-marrow-Hubbard squash, as owing to the failure of the few hills from which I expected to obtain my pure seed, I am obliged to send seed taken from squashes which grew in the field above mentioned.

As both sexes appear in the flowers on one squash vine, the tall male flower first, and afterwards the pistillate, or female, I infer, and believe that facts are with me, that the only result of fructification from neighboring plants would be to produce mongrels.

A word more about the squash borer, which, owing perhaps to the wet weather, appeared in such numbers and made such unexampled ravages during the past season. One gentleman stated that if they were carefully cut out as soon as detected the vine would heal and thrive. I tried this on several vines, in some cases tying the slit roughly together, and in others covering the opening with earth, but in general, without satisfactory results, owing perhaps, as I afterwards thought, to our not having taken all the borers from the vines. In most of the cases the sides of the slit rounded over, and there was evidently an effort at healing, while the vine would recover some of its vigor. Two vines were carefully examined with reference to the number of borers in each; in one eight were found, and in the other thirteen, having entered at the foot-stalk of the leaves, within a range of six feet from where the vine starts from the ground, and more particularly from within six inches of the hard, dense part of the stalk, just at the surface.—In the latter instance they were detected at a glance by the great swelling of this portion, which I presume, is an effort of nature to supply new channels for the flow of the impeded sap.

Now I am fully persuaded from the quantity of slitting usually necessary to extract one borer, that to destroy as many as were found in the above vines, or half as many, would be the death of the vine, as the knife will travel a little to the right or left, even with the steadiest of hands guiding, not to consider the time spent in the operation.

A friend informs me that he has killed them in the vine by syringing on the outside a solution of whale oil soap and water, continuing this for some little time. The next morning, as he states, he usually found the animal dead within the vine. It is my impression that his preparations were one pound of soap to four gallons of water. Has any of your correspondents found this or any other means efficacious?

The squash crop on the peninsular portion of this town during the past season was almost an entire failure, owing principally to the ravages of this hidden enemy, and he has thus become quite a notable among us. Can you, Mr. Editor, or any of your able correspondents, help us storm his citadel?

J. J. H. GREGORY.

Marblehead, Dec. 24, 1856.

THE TREES OF AMERICA.—Another number of this highly-finished work has just been published by the author, R. U. PIPER. The frontispiece represents an ash forest in Maine, and alone, is worth the price of the work. The other plates are the Charter Oak, at Hartford, the Elm, on Boston Common, and the Winchester Pine, on the estate of the Hon. F. O. PRINCE, at Winchester, Mass. The letter press is large and clear, and on fine, white paper. The work is a credit to all engaged in making it. For sale at Saxton's, 81 Washington Street.

PLOUGH, LOOM AND ANVIL.—We miss the suggestive and pleasant old cover of this sterling journal. Why do you shake off this time-honored old friend? The inside is like a well-ripened nut, rich and nutritious.

TUCKER'S RURAL REGISTER FOR 1857.—Fifteen thousand copies of this popular hand-book have already been sold, and the first edition completely exhausted. A second edition is now ready. Price 25 cents.

DEARTH OF AGRICULTURAL FACTS.

Some of our cotemporaries commenced the New Year with complaints of a dearth, in the agricultural press, so far as facts are concerned. Day after day, says one of our brother editors, do we scan over the broad pages of our numerous exchanges, English and American, and are compelled to throw them down without obtaining one new idea, one solitary fact.

A little reflection on these lamentations has suggested to our minds the inquiry, whether the dearth here complained of should not be regarded rather as a favorable omen, than as a matter of regret,—whether agricultural editors are not often so anxious to furnish new facts and new ideas as to injure the cause they wish to promote, by giving currency to crude, indigested and indigestible plans and "facts," which sorely disappoint the practical farmer, and shake his confidence in the recommendations of things new and old that he finds in his paper.

New facts and ideas are far less frequently developed in all the various departments of learning than the careless observer is apt to suppose. Of agriculture, we believe this remark is especially true. Still we apprehend that editors of journals devoted to other branches of art and science, find new facts about as "solitary" in the exchanges that pile their tables, as agricultural editors do. Be this as it may, we do not suppose that the value of their publications is in the ratio of the amount of absolutely new facts and ideas that are advanced.

It would, however, be very agreeable to us to be able to communicate in every issue of our paper, some valuable new idea, some fresh fact—something of practical importance, that no farmer has ever heard or thought of—something that should promote the well-being of our readers—something that should add to the knowledge of their heads, to the money in their pockets, and to the goodness of their hearts—or something that should increase their faith in our wisdom, and in the indispensable utility of our communications. We labor and look for most of these desirable results; but we have never relied upon new ideas and startling facts to produce them.

What are new ideas and new facts? It has even been said that there is no new thing under the sun. The pictured tombs of Egypt and the buried cities of Nineveh, if they fail to confirm the literal truth of Solomon's declaration, have ante-dated, some thousands of years, so many of the discoveries and inventions that have been called modern, that those best informed upon these matters are most ready to believe that railroads, telegraphs, and other most recent inventions, are mere re-productions of "that which hath been."

To us, however, the agricultural press is comparatively a new thing; and, as is often the case with other things that we regard as new, extravagant expectations of its benefits may have been encouraged by those interested in its extension. And as extravagant we must regard the promises of editors, and the expectations of readers, that an agricultural paper shall be constantly freighted with new facts, or new ideas; because agriculture—even scientific agriculture—is not a new thing. Back as far as we can trace the history of man, we find that agriculture was regarded not only as a necessity imposed by his Creator, but as a theme worthy of the poet, the philosopher, and the historian. Its eulogies were chanted by bards. Its precepts were handed down by tradition. Its details have been preserved by the sculptor. The few copies of agricultural scenes from the painted tombs of Egypt, that we have met with, have excited our curiosity to see more, and we hope that some agricultural antiquarian will yet visit these wonderful records of the past, and give us a full description of all that relate to the subject of farming. In some of the works of Mr. Glidden, we believe it was, we saw some years since, a copy of the Egyptian mode of threshing grain, with a translation of the threshers' song; the only distich of which, that we remember, was to this effect:

> "Hie along oxen, hie along faster,
> The straw for yourselves, the corn for your master."

Of Roman agriculture we are much better informed, as several of their treatises upon the subject have been preserved entire, and others in parts, or fragments. Those who have investigated the agricultural system of the Romans, say that it shows that most of the improvements in modern agriculture, have been nothing more than the revival of what was well understood and practised by that people, two centuries ago.

If, then, the agricultural press is at present suffering from a dearth of new facts and new ideas—if modern improvements and inventions are a mere repetition of what was known and practised long ago, it may be asked, of what advantage are agricultural papers to the farmer? If the value of things depended mainly upon their newness—if a truth once revealed needed no further revelation—if the wisdom of the fathers descended directly to the sons—if every farmer did not have to learn all the processes of his business for himself, and in many respects just as he would have to do were he the first man that ever planted a seed—and if facts, bare, dry facts, were the only staples of agricultural papers, then might we despair of usefulness when new ideas could neither be coined in our own brain, nor gleaned from the ample pages of our exchanges.

The good old ways our fathers trod—though often scouted—are still to be commended, in preference even to a new path, until we are well satis-

fied that it is a shorter cut, or a safer route. The cautious teamster often avoids a new road, just because it is new. His caution may be excessive, but we sometimes feel disposed, when farmers are urged to turn off into some of the many new paths that are opened to them, to imitate the town authorities in Massachusetts, and put up in large letters the inscription—"PRIVATE WAY—NOT SAFE TO TRAVEL." More than this we would not do. We would fence up no man's path. We would try, cautiously, things new as well as old, and recommend the same course to others.

And so long as farmers, like other men, require precept upon precept; so long as the storehouse of the past shall continue to furnish facts and examples which the shifting circumstances of times and places shall make applicable to their case and worthy of their imitation; so long as one farmer shall excel another; so long as untaught generations shall successively take the place of their fathers and need the instruction, the knowledge, the facts and the ideas that made them prosperous farmers and good citizens;—so long do we hope that the columns of our journal will be both interesting and instructive, though new facts and new ideas be far less frequently presented than they have been heretofore.

For the New England Farmer.

HEALTHY BREAD---No. 2.

In a former article I have brought together several reasons for abandoning the use of raised bread. But, while I have pulled down an old building, I have not very distinctly pointed to the proper method of erecting a better. In other words, I have not said how true bread ought to be made.

First, then, let your meal of every kind be unbolted. No such thing as a bolter should be known, In the use of buckwheat and oats, it will, of course, be needful to separate the hulls from the meal; but after washing clean beforehand, no such process is needful, in the case of wheat, rye, barley or corn. In order to subserve the best purposes of health, the use of whole meal, as Dr. Johnson, of England, calls it, is indispensable.

Some who are as friendly to the use of whole meal as myself, tell their friends, in a good natured way, that, though our grain should never be bolted, yet it may be desirable, before making our meal into bread, to pass it through a coarse sieve in order to exclude all the rails, posts, and pig-yokes that may have found their way into it; to which, of course, I should not very strenuously object.

The second thing to be done is to wet the meal thoroughly, and as quickly as possible. Many use scalding water for that purpose, but I prefer to have the water of a common temperature. Let it be thoroughly diffused through the mass, so as to have every particle wet; but let the mass remain at the same time as dry—that is, as little wet—as possible. They who have no instruction on this subject are very apt to leave the mass in a thin, almost semi-liquid state; but as a reward therefor, they usually have heavy bread.

The third point to be secured is to bring the mass into such a shape that we may be able to bake it quickly without burning it. To this end, let it be rolled or compressed to the thickness of from one-fourth to half an inch. You may bake in cakes of the usual size, and of every describable form, circular, square, oblong, triangular, scolloped, &c. Or you may cut it into narrow strips, from half an inch to an inch in width, and from five to six inches in length. The last named method is more laborious than the former, but it is, on the whole, preferable.

If you ask for reasons for giving a preference to the last or more laborious mode, they are found chiefly in the fact that you thus secure a great amount of surface or crust. It has been known, time immemorial, that the crust of bread is the most healthy part of it. I will not now stop to say why, but admit the fact. Now these thin, narrow strips of bread, if properly and thoroughly baked, may be regarded as wholly crust.

This brings us to the fourth consideration. Unleavened bread, to be light and tender, as well as the most sweet and healthy, should be baked quickly. With this view, we must have a hot oven.—Avoid, however, all *burning*, as I have before advised, since this developes a bitter and probably poisonous principle. Bread made in this way may be eaten hot, with comparative safety; which cannot be said of that which is made of fine flour, and is raised. And not only so, but when several days old, may by steaming, or even by a dry heat, be rendered nearly as palatable and healthy as when it first came from the oven.

No person who has been trained to this sort of bread will ever desire to return to the old, except under the desire to comply with the mandates of a power which is more tyrannical than any other—I mean custom or fashion. It is sweeter than any other, and it sets more easily on the stomach. It is to be desired, by the way, that families should grind their own meal in hand mills, and a small quantity at a time, since the peculiar flavor of the material from which it is made is thereby better retained.

If the principles and rules of proceeding which have been laid down in this article are faithfully followed out, we shall no longer hear it objected to unleavened bread that it is *heavy*. Heavy bread has a permanently doughy or leady appearance; but here is nothing of either. Unleavened bread may be more solid than that which is raised by yeast or leaven, or made light by effervescence; but if properly prepared and baked, it can never be really heavy.

"Would you not salt it?" I shall doubtless be asked. I reply by saying that in the most healthy parts of these States, out of city and village limits, such a thing as salting bread was, till recently, unknown. And even now, many refuse to salt their bread. In the nature of things, bread should no more be salted than apples or grapes; no, nor yet so much. But who is there that puts salt on his apples?

W. A. A.

Hygenic Institute, La Grange Place, Boston, Dec. 30, 1856.

HOW MUCH SHOULD A COW EAT.—Cows, to give milk, require more food than most farmers imagine. J. W. Johnson, writing from Munich to the *Country Gentleman*, gives an interesting report of some experiments which have been made in Bava-

ria, from which the following is an extract: "Our trials have confirmed the view that cows, to give the greatest possible quantity of milk, must daily receive and consume one thirtieth of their live weight in hay, or an equivalent therefore. If more food be given it goes to the formation of flesh and fat without occasioning a corresponding increase in the yield of milk; but if, on the contrary, less food be furnished, the amount and value of the milk will be greatly diminished."

For the New England Farmer.

PRESERVING FORESTS.

MESSRS. EDITORS:—Farmers have different opinions about cutting off the produce of forests from land designed for the sole use of producing wood and timber. The practice of cutting off all the growth, little and great, has been the popular custom in this vicinity for many years past; it is true that where the design is to continue a growth from the sprouts of the stumps from which the wood has been recently taken, that cutting clean might be the better way, but when we are to depend upon seed to furnish us with saplings for the next growth, I for one should dissent from cutting all young and thrifty trees. I have been in the practice of cutting off wood for nearly forty years, for the market, as one of the most profitable productions of my farm, and have paid critical attention to the succeeding growth: the original growth on my farm was principally the different varieties of oak and pitch pine. At the time of removing the old growth, young white pines had sprung up, and advanced in all sizes from one foot, up to some twenty in height, on some of my lots; on other lots there was no appearance of a young progeny. We were very careful to save all the young trees possible, instead of indiscriminate havock. The advantage of saving the saplings will be readily discerned by every practical wood-grower; the young trees carefully preserved from injury, while cutting off the old growth, will soon take a start and be in advance of the forest which is to spring from the seed some 5, 10, 15 or 20 years; this advance in the growth is no small item in the farmer's income. On lots where none of these young saplings had taken root, I have been careful to select suitable seed trees of the varieties I wished to propagate, and spared one or more on every acre I wished to replenish with a future growth. In this way I have been saved the labor of sowing seed, or transplanting trees, and have found about the third or fourth year from the cutting off, a plentiful supply of young trees shewing themselves, but greatly in the rear of those lots where the young saplings were saved.

Every person who can discern the signs of the times can foresee the importance of encouraging the growth of wood upon every scrap of land which is not wanted for cultivation. With all the effort, care, and economy which New England farmers are capable of putting into exercise, they need be under no doubtful apprehensions of producing an over supply of wood. There is a natural propensity in forest lands to exhaust themselves of the chemical principles which produce any one variety of forest trees; when that is the case, numerous saplings or some other variety will show themselves, previously to removing the former growth, which is a sure indication that it is necessary for a rotation to succeed, and that the old variety does not find in the earth the necessary constituent ingredients to produce another crop of the same variety.

Where land has a long time been covered with the different varieties of trees that shed their leaves in the fall, a plenty of evergreens will spring up for another crop which require different constituent ingredients. While the properties in the earth which favor the production of hard wood are being exhausted, the properties which are required for the formation of the softer woods lay dormant in the earth, increasing yearly and making ready to supply a substitute for the former growth by a forest of evergreens.

To multiply and replenish the earth seems to have been an injunction more readily obeyed than almost any other command; we see it conformed to without apparent reluctance from the highest grade of animals down to the most troublesome weed which infests our fields. The tendency to restoration or natural effort to recovery, we see throughout the physical world; no sooner do we lay our forests low, than do others spring up to take their places; exhausted plains which have been worn to sterility are governed by the same law, and by "atmospheric influences" tend to restoration. If I have perpetrated a repetition or a contradiction in this communication to any thing I had formerly written, I think I must be excusable on the ground that I have heard reputed good sermonizers culpable of the same inconsistencies. New readers, young and old, of agricultural papers, are annually increasing, and every one has got to study for himself; the knowledge of the experience passes away with them; knowledge, as an inheritance, cannot be transmitted to an heir or a friend by a will or a deed, and therefore every one in quest of it has to struggle through the same course of investigation to obtain it that his predecessors did. If the accumulated knowledge of the father could be communicated to the son by heirship, without study, the son, commencing with the father's experience, might continue the chain of progression till his measure was full or to perfection, and a large amount of the labor of life, apparently, might be dispensed with; but for wise ends our Creator did not see fit to endow us with such a gift. SILAS BROWN.

Wilmington, January, 1857.

STATE BOARD OF AGRICULTURE.

The annual meeting of this association took place at the Rooms of the Board in the State House, Jan. 6, 1857.

We are happy to find some notice, though it be but a brief one, of their deliberations. The inquiry is constant and earnest, "What is the Board of Agriculture doing? What is the nature of its stated meetings? Where is its Journal, or outline of operations, and what benefits does it intend to confer upon the great interest of the State for the advantages of its position?" We cannot reply. We only know that the Board is composed of men of practical ability, men willing to labor and give their time, talents, and substance, for the opportunity of attempting something to elevate the noble occupation of farming to its true standard.

When they have produced a result, the people

are anxious to know what it is. If a failure, it may be none the less valuable for that; it will prevent thousands who cannot afford to lose from striking on the same rock. If successful, the profits of the farmer are not yet so affluent as to prevent him from profiting by their wisdom.

The annual volume of Transactions,—though ever so judicious and full—is not enough. At best it will only reach a tenth of the whole, and then not those who actually need it the most. When compiled and issued, it is a book for the library and reference, and a credit to the county societies and State. But it is not a "hand book," for the kitchen or sitting-room fire-side. There is too much of it at once. The masses need the nutriment more frequently and in smaller quantities. At least, let us have a knowledge of the subjects discussed at the quarterly meetings, and the opinions there drawn out on matters of importance. Below is a report of the meeting referred to above:—

There were present Hon. Marshall P. Wilder, His Hon. Lt. Gov. Benchley, President Hitchcock, of Amherst, Messrs. Chandler, Lewis, and Bartlett, of Middlesex county, B. V. French, of Norfolk county, Tower, of Berkshire, Brooks, Felton and Parkhurst, of Worcester county, Field, of Franklin county, Hubbard and Sweetser, of Hampshire.

In the absence of His Excellency Gov. Gardner, who is *ex-officio* the President of the Board, Hon. Marshall P. Wilder was requested to preside.

Before proceeding to any business, Mr. WILDER offered the following resolutions, which were unanimously adopted.

Resolved, That the members of this Board contemplate with deep and unmingled sorrow, the death of their fellow-associate, the Hon. Seth Sprague, of Plymouth County.

Resolved, That we remember with satisfaction, the lively interest which Mr. Sprague ever manifested in the welfare of this Board, and the cause of Agriculture in this State, and especially that benevolence, courtesy and kindness of heart which had gained him the confidence and respect of all who knew him.

Resolved, That we sympathize most deeply with the relatives of the deceased in their affliction, but while we mingle our tears with theirs, we rejoice in the belief that he has passed to a higher and more glorious state of existence and happiness.

Resolved, That these resolutions be entered on the Records of this Board, and that a copy be transmitted to the family of the deceased, and also published in the papers of the day.

The subject of the State Farm next came up, and Mr. BROOKS, of Worcester County, spoke of the necessity of procuring more land in order to afford grass and hay for the cows necessary to be kept on the farm to supply the boys with milk. The Smith farm, which will furnish the required land, can now be bought cheap, and it will furnish a farm-house which is needed.

Mr. FRENCH, of Norfolk County, expressed his opinion, that more land was necessary for the purpose specified, and also to furnish additional employment for the boys.

Mr. LEWIS, of Middlesex County, thought the measure could be got before the Legislature now, with better chances of success than when it was tried two years ago. Then there was no member of the Board in the House to place it in the right light, and we shall not have the opposition of the Superintendent of the State Reform School, as before.

Other members of the Board discussed the matter, expressing their conviction of the necessity of the proposed addition, and of the expediency of making the purchase now while the land can be procured at a cheap rate. Messrs. Tower, of Berkshire, Hubbard, of Hampshire, Lt. Gov. Benchley and the President participated in the discussion.

On motion of Mr. LEWIS it was

Voted, That a Committee be appointed to apply to the Legislature for the usual annual appropriation.

The Board then adjourned to 3 P. M.

AFTERNOON SESSION.

At the afternoon session a resolve was passed authorizing the Secretary to petition the Legislature for the furnishing of the State Cabinet room.

The Board then entered into a very interesting discussion upon the subject of the Chinese Sugar Cane, which has of late attracted so much attention among agriculturists. Samples of the seed were present, and distributed among the members of the Board. President Wilder read from the Patent Office Reports, showing the success which had attended the culture of this plant, and also gave other instances of a similiar character. He expressed the opinion that it would revolutionize the sugar interest. He thought it could be grown as well as the broom corn. He thought it advisable to suggest a trial of it by our Agricultural Societies. No experiment yet tried with it has been known to fail.

Mr. BROOKS, of Worcester, expressed his doubts whether it would be more profitable than Indian corn. He was opposed to recommending it until it had been tested by himself.

President HITCHCOCK suggested that the Board should recommend County Societies to offer premiums to test it.

Mr. FRENCH sustained this suggestion—though he was not entirely convinced that it would be cultivated successfully here. Still he would have it tested.

Mr. LEWIS was satisfied from what he had seen grown that this was a most valuable plant, and he was much in favor of having the Board recommend its trial.

The suggestion of Dr. Hitchcock was embodied into a resolution, and was passed.

The Board then at 5 P. M. adjourned.—*Journal.*

FRANKLIN COUNTY.—We have the address delivered at the annual meeting last fall, of the Franklin Agricultural Society, by CHARLES L. FLINT, Esq., Secretary of the Mass. Board of Agriculture. It is chiefly devoted to the operations of the Board of Agriculture, as connected with the management of the State farm at Westboro', and with the duties and labors of the Secretary of the Board.

☞ Bellona Arsenal, 14 miles above Richmond, the property of the United States, was sold at auction for $2,650. It cost the Government $175,000. It was abandoned for unhealthiness.

MURIATE OF LIME.

We have received to-day three communications on this subject, each speaking in terms of commendation of this article as a fertilizer. The number of communications, on various topics, now waiting for a place, prevents us from giving them in full. Mr. W. F. WHEELER, of Grafton, says :—

"I consider the experiments made with this fertilizer quite successful and satisfactory as far as they go; they are by no means complete. Another season will prove more conclusively whether it is a good investment to purchase the muriate of lime. Till then I shall continue to use it. I send enclosed samples of oats grown with and without the muriate, and one of spring wheat with it."

The oats stimulated by the muriate showed to great advantage over the others. Mr. B., of Melrose, says :—"I have no doubt, if Mr. Lothrop should procure a larger quantity of the lime and use it more extensively, he would find the same results that thousands of others have, that it is the best and deepest manure that can be procured."

A Malden gentleman, "H. M.," thinks "that Gould's muriate of lime is as near what it claims to be, as any article of fertilizing properties which has been introduced to the public, there can be no question. Myself and neighbors are intending to use it quite extensively during the coming season."

These communications speak of experiments, &c., but the quotations we have made give the opinions of the writers as to he merits of the fertilizer.

WHAT A MAN COSTS—VALUE OF EDUCATION.

In a recent number of *Hunt's Merchants' Magazine*, there is an interesting calculation on the subject of raising and educating *men*. It presents a new and striking argument in favor of education. It is to be regretted that there should be any necessity for using such an argument; but as there are in the world a great many men who measure all things—even their professed religion—by the "almighty dollar," the article will do good. Aside from that, it is one of interest—from its calculation—and will be read with pleasure. We have only room for a brief extract, which goes to show how much a man costs—what he is worth—what is his real money or commercial value—and what per centage an education, if given him, pays on the original investment. Mr. Hunt says :

"The average cost, with interest, of raising any person to the age of 21, will equal $1,000. This is invested—what is the investment worth? It will cost $100 a year to support him. To this add a mind, and in what an extraordinary ratio has the person's value been raised! He can now earn, suppose $300 a year—that equals $400 above the value of the idiot, which is to be set down to the credit of mind.

"Now, add education, perfecting him from birth to maturity, and what can he earn? Is $1,000 a year too much to allow? That is $600 more than the uneducated man is allowed; and how highly must we rate the expense of education? It could not average $700, which therefore yields 100 per cent. People usually count the cost of growth and sustenance of the body as part of the expense of education; but this should never be done; a clean distinction should always be made between the expenses to be charged to the body and those to be charged to the mind; and as clear a distinction should be made in case of the credits, for at once some very practical truths would be at once exhibited. Perhaps the following table will present the truth in a conspicuous manner:

Body costs up to 21 years	$1,000
Mind costs up to 21 years	1,000
Education up to 21 years	700
Body costs after that (per year)	100
Mind gains after that (per year)	800
Education gains after that (per year)	1,000

"It is also to be noticed, that the uneducated man is more valuable in middle age than in advanced years; but the educated man grows more valuable as years increase, so that if he begin life with a sum representing the interest of $10,000, he will find his income to double quite as soon as if his capital were in gold.

"These figures are not fanciful; they are, of course, a certainty given for an uncertainty, and merely for illustration: they may be exchanged for any other to please any caviller: but any fair test of the truth will prove that education will pay more than 100 per cent. upon its cost.

"It would appear, then, that any man who would reckon up his investments, must, to what he has in lands, cattle, implements, &c., add at least $1,000 for every mature child he has raised; and if he has added to the child a good education, he has changed this otherwise unprofitable investment into a fortune of not less than $10,000. Now, every principle of commercial economy would dictate that we should add a little investment if we can thereby save the whole, and much more readily should we do it if we can turn the whole into the most profitable of all investments. And what investment is there which will pay as will brain, mind, and education combined?"

For the New England Farmer.

THE WHITE BELLIED SWALLOW.

In the Monthly *Farmer* for Nov., Mr. S. L. White says, "A pair of swallows with white breasts, and black shining backs, built their nest in the dead limb of a tree near his house, and asks to what class of swallows these birds belong. They are undoubtedly the white bellied swallow (*Hirundo viridis*;) they are the first of the swallow tribe to make their appearance in spring; after their arrival they repair to the box put up for the martin, wren, or blue bird, sometimes to a hole in the coving of an old building, or to a hollow tree, usually preferring that box or cavity the bottom of which is level with its entrance: their nest consists of grass, and lined with feathers. The female lays 4 or 5, and sometimes 6 eggs, which are pure white. They are exceedingly quarrelsome, two pairs are seldom known to breed in the same box. This species of the swallow is 5¾ inches in length, and twelve inches in extent; whole upper parts a glossy greenish blue; bill and eye jet black, wings dull greenish black, tail slightly forked, the two exterior feathers being about a ¼ of an inch longer than the two middle ones, and of the same

color as the wings; whole lower parts pure white, legs short, feet large, claws strong and sharp. In every respect the female resembles the male except that her plumage is less brilliant. A. F.

Danversport, 1857.

SUBSTITUTE FOR LEATHER.—A writer in the *Scientific American* suggests that some preparation of hemp, made up like papier mache, might be made effectual as a substitute for sole leather; a cement of india rubber, mixed with other adhesive substances, may be employed to unite the fibres together. Sole leather is fibrous, as can be witnessed by tearing a piece of it lengthwise. Its appearance, when thus riven, is like that of oakum felted.

BOYS' DEPARTMENT.

BOYS WHO WISH TO BE MEN.

Bad habits appear, sometimes, to be more easily formed than good ones, and that man is a "bundle of habits" seems to admit of little doubt. How often we see boys, who are naturally straight and well-formed, sitting curled up in such a manner as to cramp the lungs, the heart, liver and stomach, to the utter ruin of health. Boys do not think how much evil they are doing to their health and constitutions by thus sitting. It will not only make them round-shouldered, ill-formed and awkward in appearance, but undermine health and shorten life.

Writing-desks at school are often too low, which compels the pupil to bend to his work. Care should be taken by teachers and parents that the height of the desks be properly graduated to the size of pupils. Carelessness on this subject, quite as frequently as ignorance of its evil tendency, induces the parties interested to neglect this matter.

We call attention to this subject, now that the winter schools are about commencing, with a view to save not a few rapidly-growing boys, whose plastic bodies are so easily deformed by sitting crooked, at school and elsewhere.

Many children are allowed to sit on broad sofas, or deep chairs, which induces them to sit crooked, because they have nothing to support their shoulders without leaning far back, resting upon their shoulders, and thus bending their backs. Every family should have chairs adapted to the size of each person. Only think of having a chair for a man with a seat a yard or more deep, and so high that he could not touch his feet to the floor, or get into it without climbing up! But we have just such chairs and sofas for children and small young folks, who are rapidly growing and easily deformed. We would say to parents, provide your little folks with proper seats, and drive them out of big rocking-chairs and sofas every time they attempt to occupy them.

But boys, and girls too, when their seats are right, are apt to sit crooked, to the lasting detriment of their health and symmetry of their forms.

Boys! you who wish to be MEN—healthy, useful, and happy—and would therefore avoid these evils, reform at once all habits of erroneous postures; for remember, the evils will fall on yourselves, and be felt most keenly after the mischief shall have been done, and it is too late to apply the remedy.—*Phrenological Journal.*

LADIES' DEPARTMENT.

DOMESTIC RECIPES.

TO TAKE STAINS OUT OF LINEN.—Stains caused by acids can be removed by wetting the part and laying on it some salt of wormwood; then rub without diluting it with more water. Or, tie up in the stained part some pearlash, then scrape some soap into cold soft water to make a lather, and boil the linen till the stain disappears.

Recent stains of fruit may be removed by holding the linen tightly stretched over a tub and pouring hot water over the part. This may be done before any soap has been applied to it. As soon as the stain is made on table linen, &c., rub on it common table salt, before it has had time to dry. The salt will keep it damp till the cloth is washed, when the stain will disappear; or, wash the stain lightly when the cloth is removed.

TO TAKE WRINKLES OUT OF SILK SCARFS.—The way to take wrinkles out of silk scarfs and handkerchiefs is to moisten the surface evenly with a sponge and some weak glue, and then pin the silk with some toilet pins around the selvedges, on a mattress or feather bed, taking pains to draw out the silk as tight as possible; when dry, all the wrinkles have disappeared. It is a nice matter to dress light colored silk, and few should try it. Some silk articles should be moistened with weak glue or gum water, and the wrinkles ironed out by a hot flat-iron on the wrong side.

RIPE BREAD.—Bread made of wheat flour, when taken out of the oven, is unprepared for the stomach. It should go through a change, or ripen before it is eaten. Young persons, or persons in the enjoyment of vigorous health, may eat bread immediately after being baked, without any sensible injury from it; but weakly and aged persons cannot; and none can eat such, without doing harm to their digestive organs. Bread after being baked goes through a change similar to the change in newly brewed beer, or newly churned buttermilk, neither being healthy until after the change. During the change in bread, it sends off a large portion of *carbon*, or unhealthy gas, and imbibes a large portion of *oxygen*, or healthy gas. Bread has, according to the computation of physicians, one-fifth more nutriment when ripe, than when just out of the oven. It not only has more nutriment, but imparts a much greater degree of cheerfulness. He that eats old ripe bread will have a much greater flow of animal spirits, than he would were he to eat unripe bread. Bread, as before observed, discharges carbon and imbibes oxygen. One thing, in connection with this fact, should be particularly noticed by all housewives: it is to let the bread ripen where it can inhale the oxygen in a pure state. Bread will always taste of the air that surrounds it while ripening; hence it should be placed where the air is pure. It should never ripen in a cellar, nor in a bedroom.

☞ The teachers of the public schools of New Haven have presented a salver and six pieces of richly embossed silver plate to Hon. J. F. Babcock, editor of the *Palladium*, for his efforts in the cause of common schools.